

DETAIL SUPPLEMENT NO.	MUNICIPALITY	DETAIL TITLE	REVISED
SIGNS			
131M-AJ	AJ	Street Sign Installation	01-2004
2131	AV	Sign Post Installation	
2133	AV	Median Nose Signing-Type A, B & C	
C-600	CH	Median Sign	11-19- 1999
C-601	CH	Street Name Signs (For Public Streets)	11-19- 1999
C-602	CH	Collector Road Pavement Markings	01-11- 2002
C-603	CH	Metro Street Name Sign Standard	11-19- 1999
C-604	CH	Address Identification for Cluster Developments	11-19- 1999
C-605	CH	Street Name Signs (For Private Streets)	11-19- 1999
C-606	CH	Internally Illuminated Street Name Sign	11-19- 1999
C-607	CH	Internally Illuminated Street Name Sign-Bracket Assembly	11-19- 1999
C-608	CH	Internally Illuminated Street Name Sign – J/R Pole Mounting	11-19- 1999
C-609	CH	Internally Illuminated Street Name Sign – F Pole Mounting	11-19- 1999
C-610	CH	Internally Illuminated Street Name Sign – F Pole Mounting Detail	11-19- 1999
C-611	CH	Handicap Parking Space Sign	11-19- 1999
C-612	CH	Handicap Pavement Marking Symbol	11-19- 1999
C-613	CH	Sign Post and Base	01-11- 2002
C-614	CH	Pavement Marking Details	01-11- 2002
C-615	CH	Sign Post and Base Locations for Residential Streets	01-11- 2002
C-616	CH	Right Turn Land Drop	01-11- 2002
C-618	CH	Typical Signs and Markings	01-11-

		Arterial Road	2002
C-619	CH	Typical Lane Widths – Arterial Road with Double Left Turns	01-11-2002
C-620	CH	Major Arterial Deceleration Lane Signing and Striping	01-11-2002
C-621	CH	Arterial Signage	01-11-2002
C-622	CH	Arterial Roadway Markings (W/O Medians)	01-11-2002
C-623	CH	Intersection Markings (With Medians)	01-11-2002
70	GI	Street Sign	07-15-1996
71	GI	Street Sign w/ Dead End	09-28-1998
71A	GI	Street Sign w/ No Outlet	06-12-2002
72	GI	Street Sign Street Name Change at Intersection	04-01-1999
72A	GI	Street Sign Private Streets	
73	GI	Street Sign Cul-De-Sac Intersection	04-06-1999
77a	GI	Typical Arterial Signing	12-08-1999
77b	GI	School Area Signing	12-17-1999
200A	GI	Signing General Notes	
200B	GI	Signing General Notes	
200C	GI	Signing General Notes	
201B	GI	Continuous Median and Signing	
202	GI	New Stop Signs at Two Approaches	
203A	GI	School Crosswalks (2 Lane – 2 Way)	
203B	GI	School Crosswalks (Multi Lane – 2 Way)	
2060-1	MC	Offsets, Clearances and Mounting Details for Signs on County Roadways	05-2004
2060-2	MC	Offsets, Clearances and Mounting Details for Signs on County Roadways	05-2004
2061-1	MC	Octagon	05-2004
2061-1A	MC	Octagon	05-2004

2061-2	MC	Equilateral Triangle	05-2004
2061-3	MC	Isosceles Triangle	05-2004
2061-4	MC	Vertical Rectangle	05-2004
2061-5	MC	Vertical Rectangle	05-2004
2061-6	MC	Rectangle & Mile Post Blank	10-2004
2061-7	MC	Rectangle	05-2004
2061-8	MC	Rectangle	05-2004
2061-9	MC	Rectangle	05-2004
2061-10A	MC	Street Name Sign	05-2004
2061-10B	MC	Street Name Sign	05-2004
2061-10C	MC	Street Name	05-2004
2061-11	MC	Dead End	05-2004
2061-12	MC	Overhead Street	05-2004
2061-13	MC	Rectangle	05-2004
2061-14	MC	Square	05-2004
2061-15	MC	Diamond	05-2004
2061-16	MC	Multipurpose	05-2004
2061-17	MC	Multipurpose	05-2004
2061-18	MC	Pentagon	05-2004
2061-19	MC	Circle	05-2004
2061-20	MC	Interstate Shield	05-2004
2061-21	MC	County Shield	05-2004
2062-1	MC	(6") Street Sign Post Cap	05-2004
2062-2	MC	(6") Street Sign Separator Bracket	05-2004
2062-3	MC	Dead End/No Outlet Separator Bracket	05-2004
2062-4	MC	Street Sign Post Cap	05-2004
2062-5	MC	(12") Street Sign Post Cap	05-2004
2062-6	MC	(12") Street Sign Separator Bracket	05-2004
M-20.1	ME	10" Public Street Name Sign	01-01-2005
M-20.2	ME	12" Public Street Name Sign	01-01-2005
M-21.1	ME	10" Private Street Name Sign	01-01-2005
M-21.2	ME	12" Private Street Name Sign	01-01-2005
M-21.3	ME	Street Name Signs, Arterial/Collector to Local	01-01-2004
M-21.4	ME	Street Name Signs, Local to Local	01-01-2005
M-22.1	ME	Typical Signing for Arterial Streets	01-01-2002

M-22.2	ME	Sign Installations on Street Light Poles	01-01-2005
M-22.3	ME	Typical Street Name Sign Post Installation	01-01-2005
M-23.1	ME	Object And End of Road Markers, Chevron and Delineator Installation	02-08-2005
M-23.2	ME	Standard Clearance for Warning Signs	01-01-2005
M-23.3	ME	Various Sign Installations	01-01-2005
M-23.4	ME	Standard Clearances and Location for Stop Signs	02-17-2005
M-23.5	ME	Guidelines for Advance Placement of Warning Signs	01-01-2005
M-23.6	ME	Standard Handicap Parking Sign and Markings	02-08-2005
M-23.7	ME	Conventional Metro Signs	01-01-2002
M-23.8	ME	Internally Illuminated Street Name Signs	01-01-2002
M-23.9	ME	Sign Heights in Parking Lots	01-01-2005
M-25	ME	Subtractive Meter	01-08-1997
M-26	ME	Accessible & Van Accessible Parking Signs	01-01-2005
P1172	PH	Future Street Extension Sign	
2124	SC	Accessible Signage	
2132	SC	Raised Pavement Marker Layout	
2133	SC	Median Nose Signing – Type A	
2134-1	SC	Street Name Signs – Type A	
2134-2	SC	Street Name Signs – Type B	
2134-3	SC	Street Name Signs – 18” And 24” Metro	
2135	SC	Street Name Installations	
2136	SC	Advance Street Name Signs	
T-360	TE	Signage/Striping for ADA Accessible Parking Spaces	2005
T-655	TE	Private Street Name Sign Diagram	1998
TRAFFIC SIGNALS			
C-103	CH	Fiber Optic Cable Splicing	11-19-

		Vault	1999
C-103	CH	Fiber Optic Cable Splicing Vault	11-19-1999
C-104	CH	Fiber Optic Cable Ducts	11-19-1999
94	GI	Traffic Signal Interconnect	06-01-1999
95	GI	Traffic Signal Pullbox Installation	02-01-1999
96	GI	Traffic Signal Pullbox	02-01-1999
97	GI	Detector Loop Layout	02-01-1999
98	GI	Detector Loop Installation	02-01-1999
99	GI	Detector Loop Stub Out	02-01-1999
G-412	GL	Signal Equipment Anchor Base Detail	06-27-2002
G-415	GL	Signal Equipment Type 5 Pull Box	06-27-2002
G-416	GL	Guard Box for Signal Pole Base	06-27-2002
G-3260	GO	Signal Pole Standard Anchor Base Detail	07-1997
G-3261	GO	Signal Equipment Standard Type 5 Pull Box	07-1997
G-3265	GO	Modular Signal Mast Arm Sign Mounting Standards	07-1997
G-3266	GO	Modular Signal Add-On Structures	07-1997
G-3267	GO	Modular Pole Mast Arm Connection	07-1997
G-3270-1	GO	Traffic Signal Foundation Detail Foundation for Type "A" Modular (No Mast Arm)	07-1997
G-3270-2	GO	Traffic Signal Foundation Detail Foundation for Type "A" Modular (No Mast Arm)	07-1997
G-3271-1	GO	Traffic Signal Foundation Detail Foundation for Modular 20, 35, 40 Mast Arm Structures	07-1997
G-3271-2	GO	Traffic Signal Foundation Detail Foundation for Modular	07-1997

		20, 35, 40 Mast Arm Structures	
G-3272-1	GO	Traffic Signal Foundation Detail Foundation for Modular 45 Mast Arm Structure	07-1997
G-3272-2	GO	Traffic Signal Foundation Detail Foundation for Modular 45 Mast Arm Structure	07-1997
G-3275	GO	Traffic Loop Detector Detail	07-1997
G-3280	GO	Modular Pole 'Q' – 45' Mast Arm	07-1997
G-3282	GO	Modular Pole 'Q' – 40' Mast Arm	07-1997
G-3284	GO	Modular Pole 'Q' – 35' Mast Arm	07-1997
G-3286	GO	Modular Pole 'F' – 20' Mast Arm	07-1997
G-3288	GO	Modular Pole 'A-1'	07-1997
4711	MC	Pull Box Detail	04-2004
4712	MC	Pull Box Extension	02-2004
4713	MC	Typical Pull Box Installation	02-2004
4716	MC	Typical Signal Conduit Run Layout	02-2005
4717	MC	ITS Interconnect Connection	01-2005
4720	MC	Signal Pole Foundations	02-2005
4721	MC	Signal Pole Foundations	04-2004
4722	MC	Square Base ('SB') Pole Foundation Detail ITS Installation Only	07-2003
4723	MC	'P' Cabinet Foundation	07-2003
4724	MC	'SP' Service Pedestal Foundation	07-2003
4725	MC	Anchor Bolt W/ Hook	01-2005
4726	MC	Anchor Bolt W/Plate	07-2003
4727	MC	Battery Back-up System (BBS) Foundation Detail	01-2005
4729	MC	'G' Cabinet ITS Installation Only	07-2003
4730	MC	'P' Cabinet	07-2003
4731	MC	'SP' Electrical Service Pedestal	07-2003
4732	MC	Flasher Transfer Circuit	07-2003
4733	MC	Traffic Signal Battery Back- Up System (BBS)	01-2005
4735	MC	Controller Cabinet Wiring	07-2003

		Schematic	
4737	MC	Luminaire Circuits	07-2003
4738	MC	Type 'A' Pole	07-2003
4740	MC	Type 'E' Pole	07-2003
4741-1	MC	Type 'F' Pole	07-2003
4747-2	MC	Type 'E' and 'F' Pole Details	07-2003
4742	MC	Type 'J' Pole	07-2003
4743	MC	Type 'Q' Pole	07-2003
4744	MC	'J' & 'Q' Pole Details	07-2003
4745	MC	Type 'SB' Pole ITS Installation Only	07-2003
4748	MC	Type 'K' Pole	07-2003
4749-1	MC	Type 'R' Pole	07-2003
4750	MC	Type 'PB' Pole	07-2003
4751	MC	Square Base Pedestal	07-2003
4757	MC	Loop Installation Details	01-2005
4758	MC	Conduit Stub-Out Detail	07-2003
4759	MC	Conduit Stub-Out Detail with Curb and Gutter	07-2003
4773	MC	Standard Signal Faces	01-2005
4774	MC	Signal Head Visor	07-2003
4775	MC	Side Mount (Type XI) Assembly (Vehicle and Pedestrian)	01-2005
4776	MC	Pole Top (Type III) Mounting Assembly	07-2003
4778-1	MC	Mast Arm Signal Head Mount (Type II)	07-2003
4778-2	MC	Elevator Plumbizer Detail	07-2003
4780-1	MC	Metro Street Design Layout Sheet Installation on Signal Poles	01-2005
4780-2	MC	Metro Street Sign Layout and Installation on Traffic Signal Pole	01-2005
4780-3	MC	Metro Street Sign Clamp	02-2004
4783	MC	Pedestal Post Top Mounting (G-1) ITS Installation Only	07-2003
4784	MC	Post Side Mount (G-2) ITS Installation Only	07-2003
4785	MC	Pole Plate	07-2003
4786	MC	Pole Top Mount Adaptor	07-2003
4787	MC	Pedestal Pole Top Mounting Adapter ITS Installation Only	07-2003
4788	MC	Elbow	07-2003

4789	MC	Tee	07-2003
4791	MC	Ornamental Cap	07-2003
4792	MC	Side Mounted Terminal Compartment	07-2003
4793	MC	Terminal Compartment Cover	07-2003
4794	MC	Type V Mounting Assembly	07-2003
4795	MC	Type VII Mounting Assembly	07-2003
4797-1	MC	Type PB Pedestrian Push- Button Mount	07-2003
4797-2	MC	Pedestrian Push-Button Housing	07-2003
4797-3	MC	Pedestrian Push Button Adaptor Plate	07-2003
4798	MC	Underground Power Service and Battery Backup System Layout	01-2005
4799-1	MC	Color Code – 4 Conductor Cable	07-2003
4799-2	MC	Color Code – 20 Conductor Cable	07-2003
4801	MC	Typical Outerduct Installation	07-21- 2003
4810	MC	Conduit and No. 7 Pull Box Installation	03-20- 2003
4811	MC	Conduit and No. 9 Pull Box Installation	03-20- 2003
4812	MC	Typical Conduit Through Sleeves Depth Less Than or Equal to 9'	03-19- 2003
4813	MC	Typical Conduit Installation Through Sleeve Depth Greater than 9'	03-19- 2003
4820	MC	Fiber Optic No. 9 Pull Box Rack, Hook and Cover Assembly	03-19- 2003
M-90.1	ME	Traffic Signal General Notes	02-09- 2006
M-90.2	ME	Traffic Signal Construction Procedures	02-16- 2006
M-91.1	ME	Traffic Signal Fully Metered Service Pedestal	01-18- 2006
M-91.2	ME	Traffic Signal Split Service Pedestal	01-18- 2006
M-92.1	ME	Traffic Signal Cabinet Foundation	01-18- 2006

M-92.2	ME	Traffic Signal U.P.S. Foundation	01-18-2006
M-92.3	ME	Pole & Foundation Location & Grounding	01-18-2006
M-93.1 SHT. 1 of 2	ME	Traffic Signal Pull Boxes	01-18-2006
M-93.1 SHT 2 of 2	ME	Fiber Optic/Traffic Signal Pull Boxes	01-18-2006
M-93.2	ME	Traffic Signal Pull Box Installation	01-18-2006
M-93.3	ME	Traffic Signal Fiber-Optic Installation	01-18-2006
M-93.4	ME	Fiber-Optic Trunk-Line Conduit Installation Details	01-18-2006
M-93.5	ME	Conduit Layout for Future Traffic Signals	01-18-2006
M-94.1	ME	City of Mesa Type "A" Pole	01-18-2006
M-94.2	ME	City of Mesa Type "F" Pole	01-18-2006
M-94.3	ME	City of Mesa Type "Q" Pole	02-16-2006
M-94.4	ME	City of Mesa Type "R" Pole	02-16-2006
M-94.5	ME	City of Mesa Modified Type "J" Pole	02-16-2006
M-94.6	ME	City of Mesa Modified Type "K" Pole	02-16-2006
M-94.7	ME	Mast Arm Tenon Spacing	01-18-2006
M-94.8	ME	Bike Push Button Installation	02-16-2006
M-94.9	ME	City of Mesa Bicycle/Pedestrian Pole	02-16-2006
M-95.1	ME	Signal Pole Drilling Detail	01-18-2006
M-95.2	ME	Signal Head Assembly	01-18-2006
M-95.3	ME	Type "S" Cluster Head	01-18-2006
M-95.4	ME	ADA Push Button	01-18-2006
M-96.1	ME	Detector Loop Installation Details	01-18-2006
M-96.2	ME	Detector Loop Layout	01-18-

			2006
M-96.3	ME	Detector Loop Stubout	02-16-2006
M-96.4	ME	Video Detection Camera Installation	01-18-2006
M-97.0	ME	Traffic Signal & Fiber Optic Cable Spec.	02-08-2006
M-97.1	ME	IMSA Conductor Cable ID Coding	01-18-2006
M-97.2	ME	IMSA 20 Conductor Cable 2 Phse Operation	01-18-2006
M-97.3	ME	IMSA 20 Conductor Cable 8 Phase Operation	01-18-2006
M-97.4	ME	IMSA Cable Conductors in Traffic Signal Poles	01-29-2003
M-98.1	ME	Internally Illuminated Sign Specification	01-29-2003
M-98.2	ME	Illuminated Sign Layout & Installation	01-29-2003
M-98.3	ME	Internally Illuminated Signs Plan Sheet	01-29-2003
M-99.1	ME	Push Button Station Signs	01-18-2006
M-99.2	ME	Bicycle Push Button Station Signs	01-29-2003
2137	SC	Loop Detectors	
2138	SC	Signal Pole Drilling Detail	
2139	SC	Traffic Signal Controller Cabinet Base Extender	
2140	SC	Model 330 Input Rack Wiring Instructions	
2141	SC	Tape Color codes For Traffic Signal Wiring	
T-453	TE	Traffic Signal Pull Boxes	1998
T-540	TE	Modular Pole 'Q' – 25' Mast Arm	2005
T-541	TE	Modular Pole 'J' – 25' Mast Arm	2005
T-544	TE	Modular Pole 'Q' – 30' Mast Arm	2005
T-545	TE	Modular Pole 'J' – 30' Mast Arm	2005
T-548	TE	Modular Pole 'Q' – 50' Mast Arm	2004
T-550	TE	Modular Pole 'Q' – 45' Mast	2001

		Arm	
T-551	TE	Modular Pole 'J' – 45' Mast Arm	2001
T-552	TE	Modular Pole 'Q' – 40' Mast Arm	2001
T-553	TE	Modular Pole 'J' – 40' Mast Arm	2001
T-554	TE	Modular Pole 'Q' – 35' Mast Arm	2001
T-555	TE	Modular Pole 'J' – 35' Mast Arm	2001
T-556	TE	Modular Pole 'F' – 20' Mast Arm	2001
T-557	TE	Modular Pole 'E' – 25' Mast Arm	2001
T-558	TE	Modular Pole 'A-1'	2001
T-559	TE	Modular Pole 'A-2'	2001
T-560	TE	Modular Pole Mast Arm Connection	2001
T-561	TE	Modular Signal Add-On Structures	2001
T-562	TE	Modular Signal Mast Arm Sign Mounting Standards	2001
T-570 1 of 2	TE	Traffic Signal Foundation Detail – Foundation for Type "A" Modular (No Mast Arm)	2001
T-570 2 of 2	TE	Traffic Signal Foundation Detail – Foundation for Type "A" Modular (No Mast Arm)	2001
T-571 1 of 2	TE	Traffic Signal Foundation Detail for Modular 20, 35, 40 Mast Arm Structures	2001
T-571 2 of 2	TE	Traffic Signal Foundation Detail for Modular 20, 35, 40 Mast Arm Structures	2001
T-572 1 of 2	TE	Traffic Signal Foundation Detail for Modular 45 Mast Arm Structures	2001
T-572 2 of 2	TE	Traffic Signal Foundation Detail for Modular 45 Mast Arm Structures	2001
T-573 1 of 2	TE	Traffic Signal Foundation Detail for Modular 50 Mast Arm Structures	2001
T-573 2 of 2	TE	Traffic Signal Foundation	2001

		Detail for Modular 50 Mast Arm Structures	
T-575	TE	Traffic Loop Detector Detail	1998
T-576	TE	Bicycle Loop Detector Detail	2000
T-577	TE	Bicycle Push Button and Pole Detail	1999
PAVEMENT MARKINGS			
300A	GI	Striping General Notes	
300B	GI	Striping General Notes	
300C	GI	Striping General Notes	
300D	GI	Striping General Notes	
301A	GI	Bike Pavement Marking Stencils	
301B	GI	Handicap Parking Symbols	
301C	GI	Pavement Marking Stencils Symbols	
302	GI	Pavement Marking Extensions Through Intersections	
303	GI	Bike Lane/Right Turn Lane	
304A	GI	Curb Markings for Raised Medians	
304B	GI	Curb Markings for Raised Medians and Islands	
305A	GI	Typical Installation of Raised Pavement Markers	
305B	GI	Pavement Marking Details	
306	GI	Raised Pavement Marker Details	
G3210	GO	Pavement Marker Layout	07-1997
M-46.1	ME	Arterial St. Intersection (4 Lanes) w/ Raised Medians	
M-46.2	ME	Arterial St. Intersection (4 Lanes) w/ Striped Medians	
M-46.3	ME	Arterial St. Intersection (6 Lanes) w/ Raised Medians	
M-46.4	ME	Arterial St. Intersection (6 Lanes) w/ Striped Medians	
M-46.5	ME	Transition from Striped to Raised Median	
M-46.6	ME	Typical Striping Cross Sections	12-22-2005
M-46.7	ME	Typical Intersection Approach Striping	02-10-2006
M-47.1	ME	Right Turn Lane Treatments	04-11-

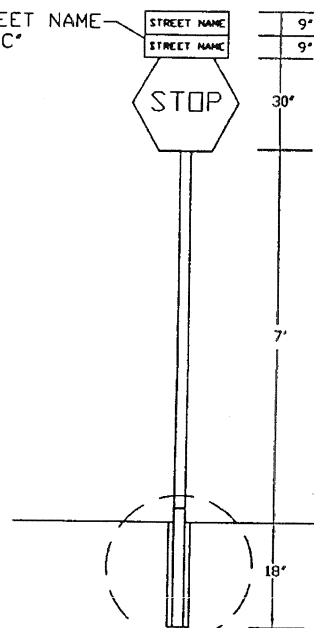
			2005
M-47.2	ME	Right Turn Trap Lane Treatments	04-03-2005
M-47.3	ME	Typical Application of Pavement Arrows	02-07-2006
M-47.4	ME	Dual Left Turn Lane Line Extension	01-01-2002
M-47.5	ME	Typical Bike Lane Layouts	12-22-2005
M-46.1	ME	Arterial Street Intersection (4 Lanes) With Raised Medians	02-10-2006
M-46.2	ME	Arterial Street Intersection (4 Lanes) With Striped Medians	02-10-2006
M-46.3	ME	Arterial Street Intersection (6 Lanes) With Raised Medians	02-10-2006
M-46.4	ME	Arterial Street Intersection (6 Lanes) With Striped Medians	02-10-2006
M-46.5	ME	Transition from Striped to Raised Median	02-10-2006
M-46.6	ME	Typical Striping Cross Sections	12-22-2005
M-46.7	ME	Typical Intersection Approach Striping	02-10-2006
M-47.1	ME	Right Turn Lane Treatments	04-11-2005
M-47.2	ME	Right Turn Trap Lane Treatments	04-03-2005
M-47.3	ME	Typical Application of Pavement Arrows	02-07-2006
M-47.4	ME	Dual Left Turn Lane Line Extension	01-01-2002
M-47.5	ME	Typical Bike Lane Layouts	12-22-2005
###	PE	Pavement Marking Manual	10-15-2001
###	PE	Pavement Marking Manual	10-15-2001
2131	SC	Raised Pavement Marker Layout	05-25-2005
LANDSCAPING			
G-1000	GL	Effluent Distribution Vault Access Hatch	06-28-2002
G-3600-1	GO	Minimum Tree Size Requirements	07-1997
G-3000-2	GO	Minimum Tree Size	07-1997

		Requirements	
G-3600-3	GO	Minimum Tree Size Requirements	07-1997
G-3610-1	GO	Landscape Details	07-1997
G-3610-2	GO	Landscape Details	07-1997
G-3610-3	GO	Landscape Details	07-1997
G-3612	GO	Planting Details for Saguaros	07-1997
G-3631	GO	Irrigation Emitter Layout	07-1997
G-3661	GO	Urban Trail Alignment	07-1997
G-3662	GO	Trail in Drainage Channels or Drainage Easement	07-1997
G-3665	GO	Minimum Trail Clearances	07-1997
G-3671	GO	Hiking Trail Head	07-1997
G-3672	GO	Trail Head (Equestrian Support Site)	07-1997
G-3673	GO	Major Trail Head	07-1997
G-3680-1	GO	Trail Access Gates	07-1997
G-3680-2	GO	Trail Access Gates	07-1997
G-3681	GO	Trail Water Bars	07-1997
G-3682	GO	Trail Safety Barriers	07-1997
G-3683	GO	Trail Signs	07-1997
G-3690	GO	Trail Underpasses	07-1997
G-3695	GO	Approaches to Overpasses and Bridges	07-1997
G-3696	GO	Overpasses and Bridges	07-1997
2600-1	SC	Minimum Tree Size Requirements	
2600-2	SC	Minimum Tree-Size Requirements	
2600-3	SC	Minimum Tree-Size Requirements	
2620-1	SC	Landscape Details	07-29-1996
2620-2	SC	Landscape Details	01-05-2000
2620-3	SC	Landscape Details	01-05-2000
2631	SC	Irrinet Pedestal Mounted Controller	04-25-2002
2632	SC	Scorpio Pedestal Mounted Controller	04-25-2002
2633	SC	Scorpio Wall Mounted Controller	07-15-2003
2634	SC	Irrinet Wall Mounted Controller	04-25-2002

2635-1	SC	Solar Controller	04-25-2002
2635-2	SC	Solar Controller and Backflow Preventer Enclosure	04-25-2002
2636	SC	Irrigation Push Button Control	
2641-1	SC	Single and Multi-Outlet Emitters	03-29-2005
2641-2	SC	Irrigation Emitter Layout	07-29-1996
2642	SC	Irrigation Trenching	04-18-2005
2643	SC	Irrigation Thrust Block	01-11-2000
2644	SC	Rotor Sprinkler Assembly	02-27-2002
2645	SC	Pop-Up Sprinkler Assembly	02-27-2002
2646	SC	Shrub Pop-Up Sprinkler Assembly	02-27-2002
2647	SC	Drip Filter and Pressure Regulator	07-15-2003
2648	SC	Emitter Flush Cap Assembly	01-05-2000
2649	SC	Quick Couple Assembly	07-15-2003
2650	SC	1-1/2" & Smaller Mainline Ball Valve	07-15-2003
2651	SC	2" & Larger Mainline Isolation Gate Valve	07-15-2003
2652	SC	1" Master Valve/Flow Meter	07-15-2003
2653	SC	1-1/2" Larger Master Valve/Flow Meter	07-15-2003
2654	SC	Remote Control Valve Assembly	05-04-2004
2655	SC	Typical Irrigation Wire Connection	03-09-2005
2680-1	SC	Trail Access Gates	
2680-2	SC	Trail Access Gates	
2681	SC	Trail Water Bars	
2682	SC	Trail Safety Barriers	
2983	SC	Trail Signs	
FIRE DEPARTMENT			
FD101	CH	Fire Dept Connection and Post Indicating Valve	02-08-2000

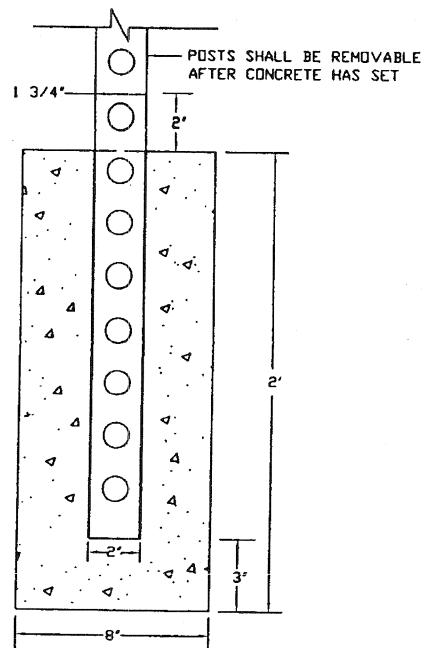
FD102	CH	Double Check Valve	02-08-2000
FD103	CH	Double Check Valve Backflow Prevention Assembly (private fire service main)	02-08-2000
FD105	CH	Fire Sprinkler System Riser Commercial Installation	02-02-1999
FD111	CH	Fire Lane Signage	02-02-1999
FD112	CH	Fire Land Signage (Private Streets and Subdivisions)	02-02-1999
FD121	CH	Hydrant Identification and Color Coding	02-02-1999
FD122	CH	Fire Hydrant Clearance	02-02-1999
FD123	CH	Out of Service Signs	02-02-1999
FD131	CH	Hydrant Reflector Locations on Private Fire Systems	02-02-1999
FD141	CH	Fire Apparatus Roadways and Turnarounds	03-17-1999
FD151	CH	Address Identification	02-08-2000

SEE STREET NAME
DETAIL "C"



SEE FOUNDATION
DETAIL "B"

DETAIL "A"



DETAIL "B"

ALL POSTS SHALL BE MADE OUT OF GALVANIZED STEEL AND HAVE 7/16" DIA. PERFORATED HOLES SPACED AT 1" CENTER TO CENTER ON ALL FOUR SIDES. ALL SIGN VINYL SHALL BE MADE OF HI-INTENSITY MATERIAL

ACACIARD →
1600 N

CITY OF APECHE JUNCTION STREET NAME SIGN:

FONT: HIGHWAY GOTHIC

GREEN ENGINEER GRADE REFLECTIVE SHEETING - SINGLE WRAP AROUND
WHITE ENGINEER GRADE REFLECTIVE SHEETING - SINGLE WRAP AROUND

ALUMINUM BLANK SIZES: 9"X30", 9"X36", 9"X42", OR 9"X60"

STREET NAME SHALL BE A MINIMUM 6" IN HEIGHT
(OR AS SHOWN TO LEFT) & POSITIONED TO THE LEFT

TYPE OF STREET (RD, ST, AVE, ETC.) & DIRECTIONAL ARROW SHALL
BE 2" IN HEIGHT AND POSITIONED UPPER RIGHT

BLOCK NUMBER DESIGNATIONS SHALL BE 2" IN HEIGHT AND POSITIONED
LOWER RIGHT

A 1/2" BORDER SHALL BE PLACED AROUND ALL SIDES

SLEEVE SHALL BE COVERED TO PREVENT CONCRETE
FROM ENTERING HOLES

DETAIL "C"

IF QUESTIONS CALL (480) 474-8519

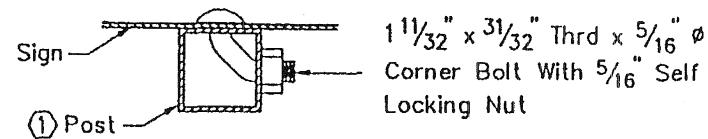
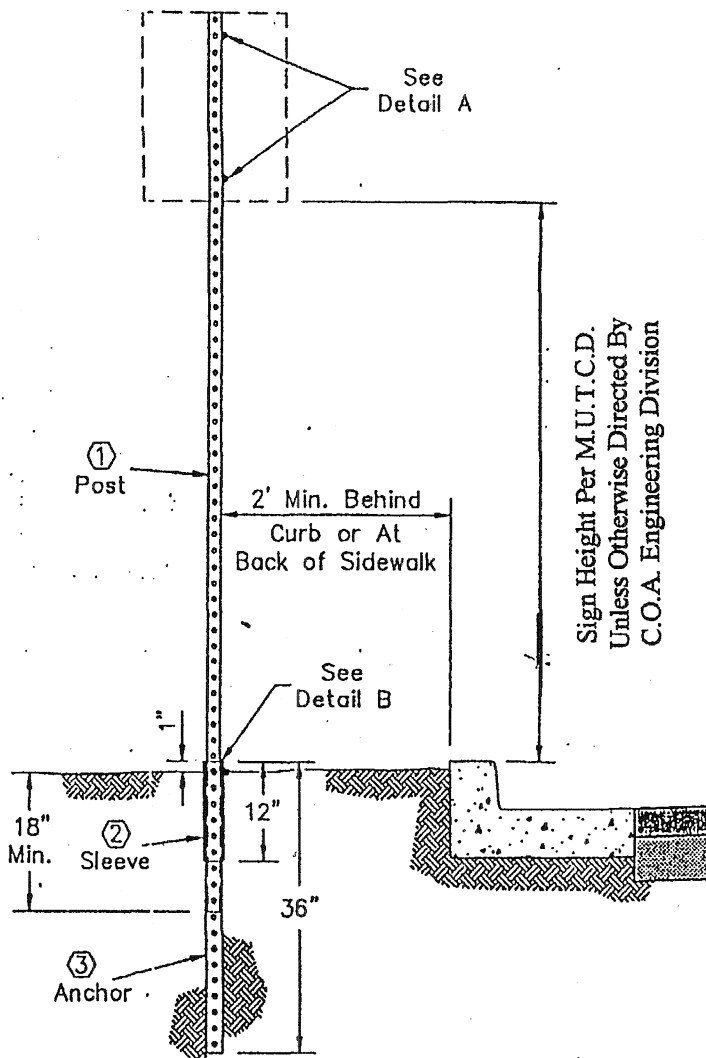
DETAIL NO.
131M-AJ

STANDARD DETAIL
JANUARY, 2004

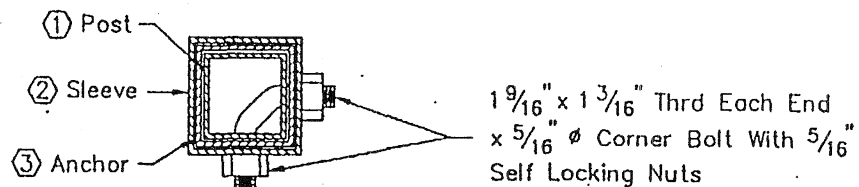
STREET SIGN INSTALLATION

CITY OF APACHE JUNCTION
PUBLIC WORKS/ENGINEERING
(480) 982-1055

DETAIL NO.
131M-AJ



Detail A
Sign Mounting



Detail B
Anchor Assembly

Legend

- ① Post - $1\frac{3}{4}'' \times 1\frac{3}{4}''$ Square Perforated 0.105" Galvanized Steel Tubing (~~Green Finish~~)
- ② Sleeve - $2\frac{1}{4}'' \times 2\frac{1}{4}'' \times 12''$, Square Perforated 0.105 Galvanized Steel Tubing (~~Green Finish~~)
- ③ Anchor - $2'' \times 2'' \times 36''$, Square Perforated 0.105" Galvanized Steel Tubing (~~Green Finish~~)

NOTE:

Sign Post, Sleeve And Anchor Per COA
Pavement Marking & Signing Spec. Section 23.15-17.5

DETAIL NO.



CITY OF AVONDALE
STANDARD DETAILS

APPROVED BY:

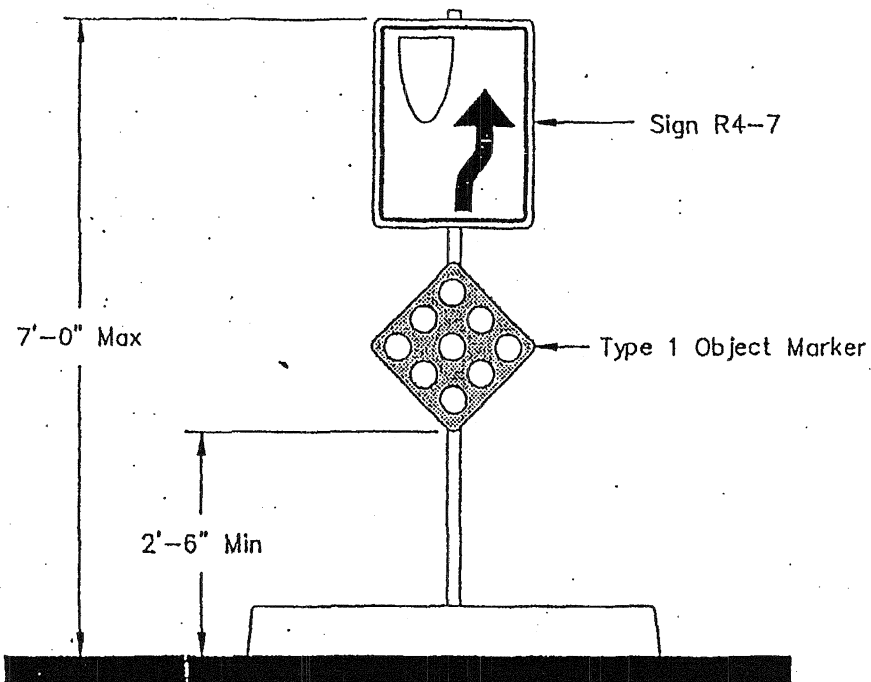
SIGN POST INSTALLATION

DETAIL NO.

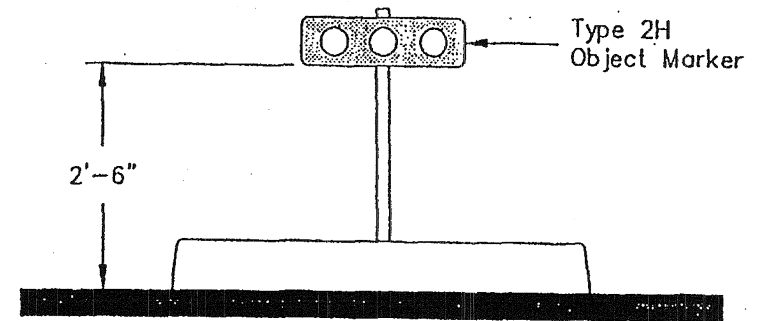
2131

NOTES:

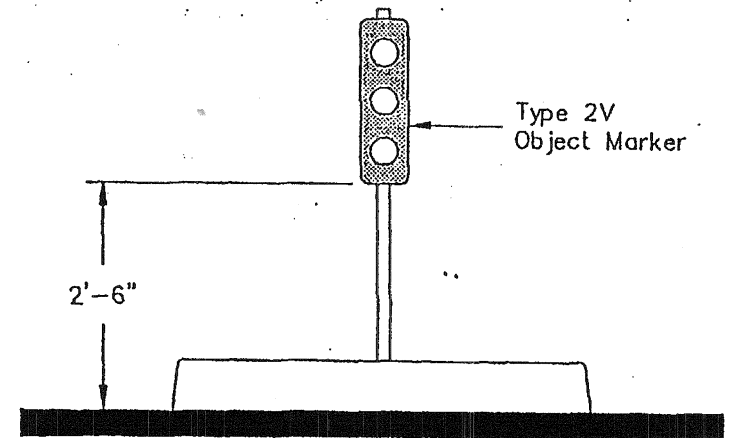
1. See COA Standard Details For Typical Location.
2. Sign Posts Per COA Standard Details



TYPE "A"



TYPE "B"



TYPE "C"

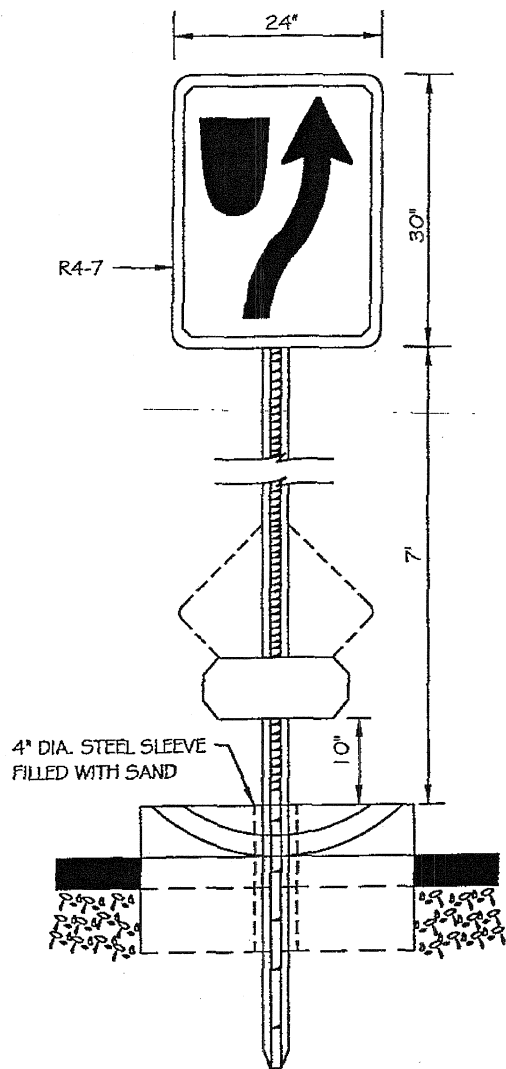
DETAIL NO.
2133

**CITY OF AVONDALE
STANDARD DETAILS**

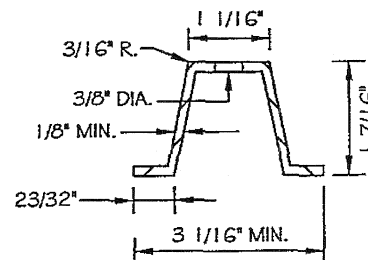
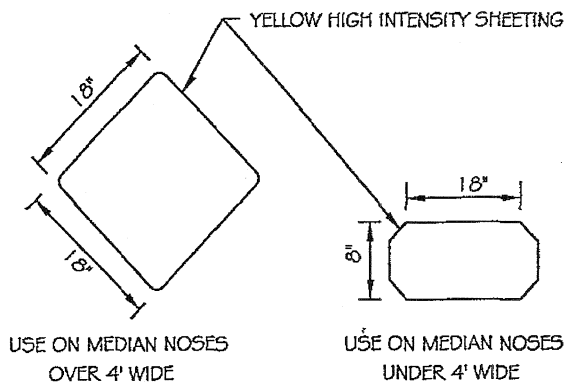
APPROVED BY:

MEDIAN NOSE SIGNING-TYPE A,B & C

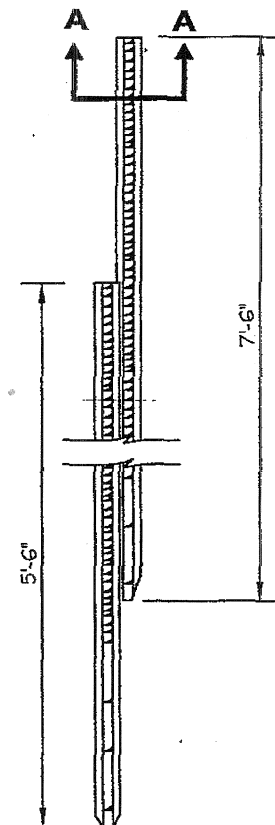
DETAIL NO.
2133



ARTERIAL INTERSECTIONS



GALVANIZED STEEL POST A-A (2 FT. LBS)



NOTES:

1. SIGNS SHALL BE INSTALLED 5' BACK OF FACE OF BULLNOSE ON MEDIANS 4' IN WIDTH OR LESS AND 10' BACK ON MEDIAN WIDTHS GREATER THAN 4'.
2. MUTCD R4-7 SIGN SHALL BE INSTALLED AT ALL ARTERIAL INTERSECTIONS AND AT THE POINT WHERE THE MEDIAN BEGINS.

C-600
REPLACES
37B



CITY OF
CHANDLER
STANDARD
DETAIL

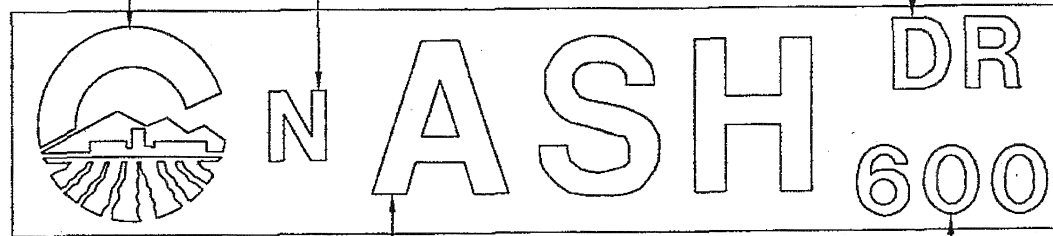
MEDIAN SIGNAGE

APPROVED: *Byron D. Patterson*
CITY ENGINEER
DATE: *11-19-99*

DETAIL NO.
C-600
NTS

5" CITY LOGO

2" LETTERS



4" LETTERS OR NUMBERS

2" NUMBERS

BLANKS - EXTRUDED ALUMINUM BLADES
MIN. 6"x18" MAX. 6"x48"
HS-1 OR VSS-1 EXTRUSION

BACKGROUND - 3M BROWN REFLECTIVE SHEETING
HIGH INTENSITY GRADE, CODE NO. 2279 S/L

MAXIMUM 4" LETTERS ON SIGN BLANK IS 14
PLUS LOGO AND HUNDRED BLOCK

4" LETTERS - 3M (PARKWAY WHITE) SERIES 'C'
2" LETTERS - 3M (PARKWAY WHITE) SERIES 'C'
HIGH INTENSITY GRADE

4" NUMBERS - 3M (PARKWAY WHITE) SERIES 'C'
2" NUMBERS - 3M (PARKWAY WHITE) SERIES 'C'
HIGH INTENSITY GRADE

CITY LOGO - 5" WHITE, PRESSURE SENSITIVE
HIGH INTENSITY GRADE MATERIAL

C-601
REPLACES
115A



CITY OF
CHANDLER
STANDARD
DETAIL

STREET NAME SIGNS
(FOR PUBLIC STREETS)

APPROVED:

DATE:

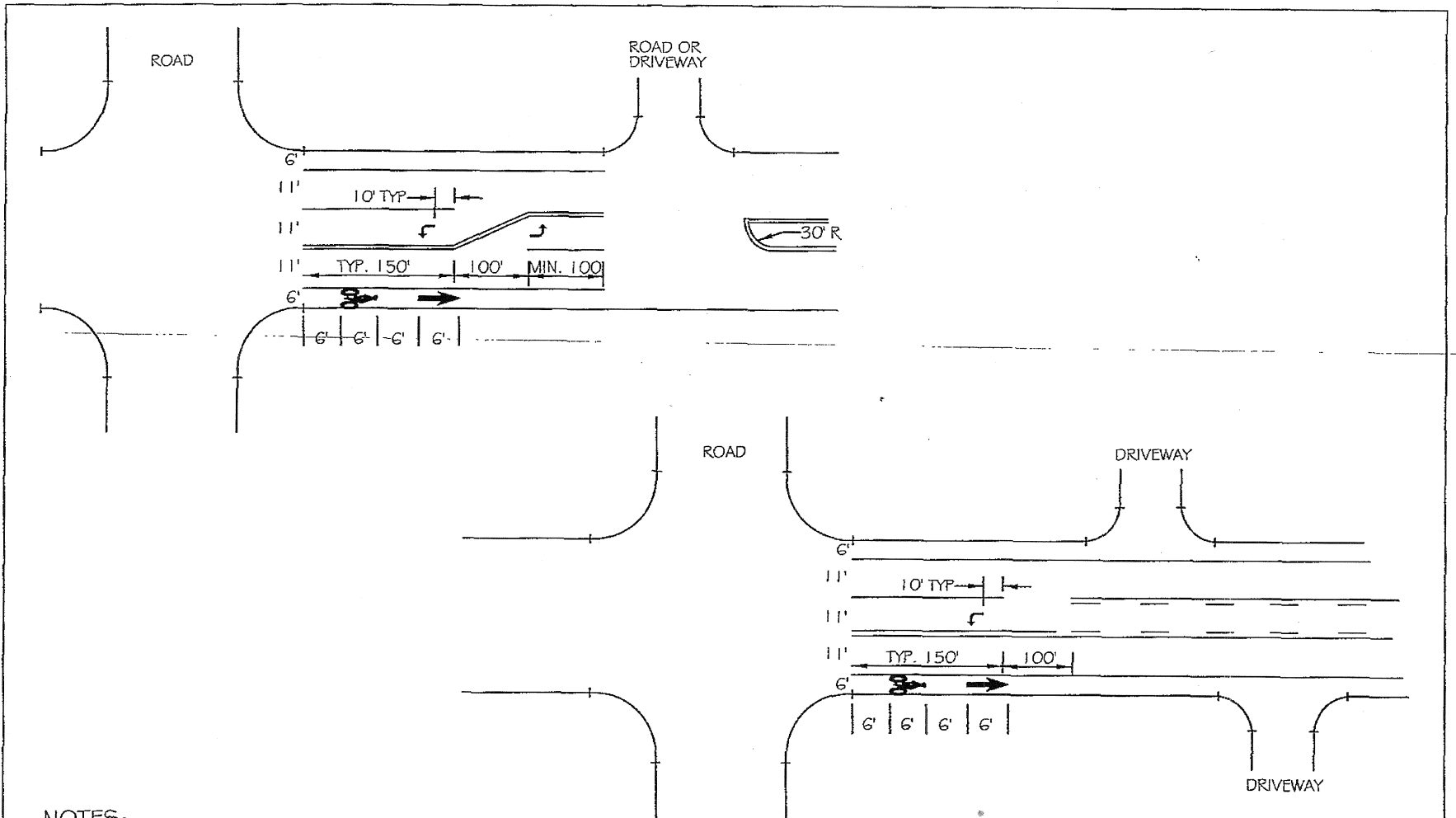
[Signature]
CITY ENGINEER

11-19-99

DETAIL NO.

C-601

NTS



NOTES:

1. ALL DIMENSIONS TO BACK OF CURB.
2. DO NOT INSTALL REFLECTORS ON COLLECTOR ROADS.
3. INSTALL BIKE SYMBOL AND ARROW DOWNSTREAM FROM ALL INTERSECTIONS.
4. BREAK TWO-WAY LEFT TURN PAVEMENT MARKINGS FOR INTERSECTIONS. DO NOT BREAK FOR DRIVEWAYS.

DETAIL NO.

C-602

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

**COLLECTOR ROAD
PAVEMENT MARKINGS**

APPROVED

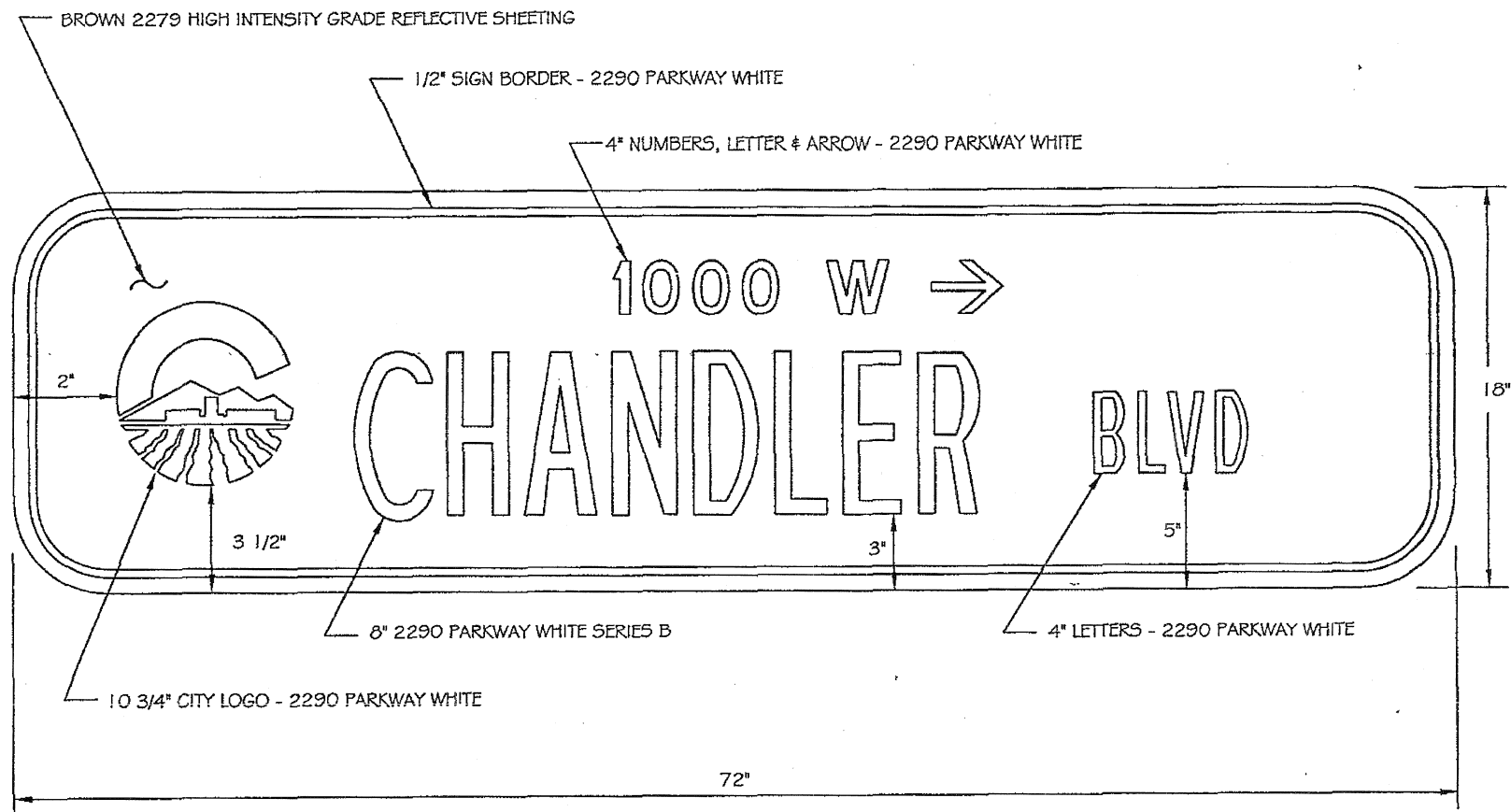
DATE:

K. J. [Signature]
CITY ENGINEER
January 21, 2002

DETAIL NO.

C-602

NTS



NOTE:

1. METRO STREET NAME SIGNS TO BE INSTALLED AT ALL SIGNALIZED INTERSECTIONS.
2. ALL REFLECTIVE SHEETING SHALL BE "HIGH INTENSITY GRADE".

C-603 REPLACES 116	 CITY OF CHANDLER STANDARD DETAIL	METRO STREET NAME SIGN STANDARD	APPROVED:  CITY ENGINEER DATE: 11-19-99	DETAIL NO. C-603 NTS
--	---	---	--	-----------------------------------



1000 - 1010

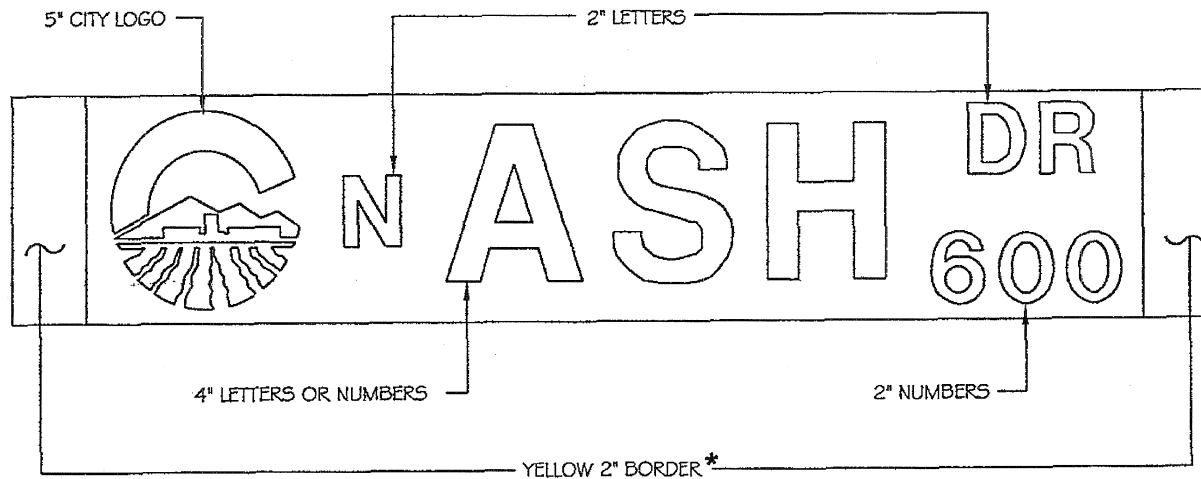
4" NUMBERS

BLANKS - EXTRUDED ALUMINUM BLADES
MIN. 6" x 18" MAX. 6" x 48" AS REQUIRED
HS-1 OR VSS-1 EXTRUSION

4" NUMBERS - 3M (PARKWAY WHITE) SERIES 'C'
HIGH INTENSITY GRADE

BACKGROUND - 3M BROWN REFLECTIVE SHEETING,
HIGH INTENSITY GRADE, CODE NO. 2279 S/L

C-604 REPLACES 113B	 CITY OF CHANDLER STANDARD DETAIL	ADDRESS IDENTIFICATION FOR CLUSTER DEVELOPMENTS	APPROVED:  CITY ENGINEER DATE: <u>11-19-99</u>	DETAIL NO. C-604 NTS
---	--	--	---	-----------------------------------



BLANKS - EXTRUDED ALUMINUM BLADES
MIN. 6" x 18" MAX. 6" x 48" AS REQUIRED
HS-1 OR VSS-1 EXTRUSION

BACKGROUND - 3M BROWN REFLECTIVE SHEETING
HIGH INTENSITY GRADE, CODE NO. 2279 S/L

BORDER - 2" WIDE YELLOW, REFLECTIVE, HIGH
INTENSITY GRADE PRESSURE SENSITIVE MATERIAL

*USED ONLY TO DELINEATE PRIVATE STREETS.
NO YELLOW BORDER FOR SIGNS ON PUBLIC STREETS.

4" LETTERS - 3M (PARKWAY WHITE) SERIES 'C'
2" LETTERS - 3M (PARKWAY WHITE) SERIES 'C'
HIGH INTENSITY GRADE

4" NUMBERS - 3M (PARKWAY WHITE) SERIES 'C'
2" NUMBERS - 3M (PARKWAY WHITE) SERIES 'C'
HIGH INTENSITY GRADE

CITY LOGO - 5" WHITE, PRESSURE SENSITIVE,
HIGH INTENSITY GRADE REFLECTIVE MATERIAL

C-605
REPLACES
113A



CITY OF
CHANDLER
STANDARD
DETAIL

STREET NAME SIGNS
(FOR PRIVATE STREETS)

APPROVED: *Bryan D. Patterson*
CITY ENGINEER
DATE: *11-19-99*

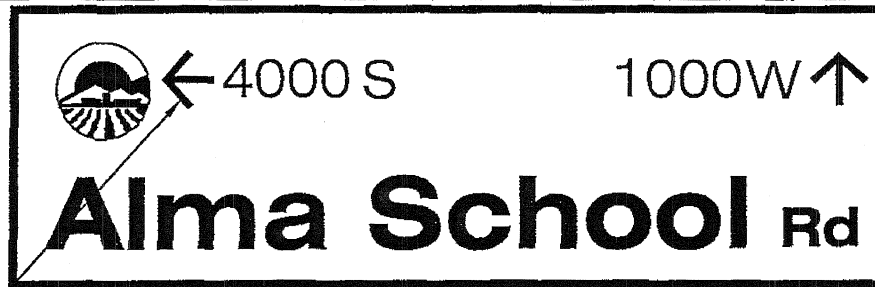
DETAIL NO.
C-605
NTS

OPPOSITE FACE

MOUNTING BRACKET IS ON THIS SIDE OF SIGN CABINET

6" ARROWS
(TYP) ALL SIGNS
(TIP TO TIP)

30"
10 1/2" DIA
3"
9"
3"



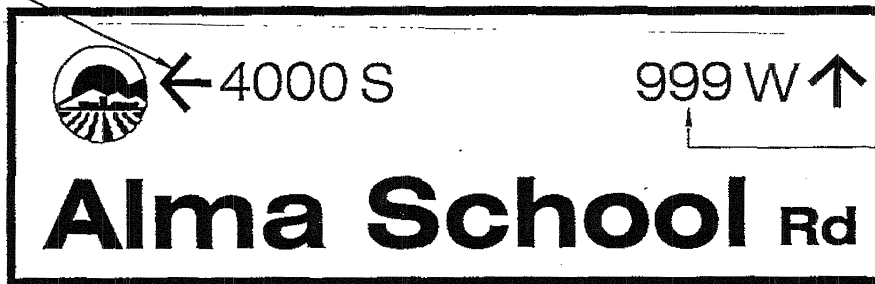
8'-05/8"

4" 10 1/2" DIA

1 1/2" SPACE

F96T12CW/HO LAMPS
51-792R SIGN BALLAST
BI-PIN LAMP SOCKETS OPERATED BY PHOTOCELL
ON POWER METER PEDESTAL;
SAME CIRCUIT AS STREETLIGHTS ON SIGNAL POLES

4" TO CENTER OF ARROW



5"
4" COPY

STANDARD SPACING FOR ADDRESS NUMERALS

MOUNTING BRACKET IS ON THIS SIDE OF SIGN CABINET

4-1/2" COPY
3"

EQUAL

EQUAL

1 1/2" RETAINERS (TYP.)

COPY TO BE CENTERED WITHIN THIS AREA EXCEPT WHEN THE AMOUNT OF CHARACTERS EXCEEDS THE ALLOWABLE SPACE. SPACING HAS BEEN INCREASED BY 70% WHEN ALLOWABLE.

CABINET: EXTRUDED ALUMINUM 12" DEEP PRIMED AND PAINTED M.A.P. #41-342 BRUSHED ALUMINUM, SATIN FINISH. INCLUDE HINGED FACE WITH PROP ROD FOR SERVICE. RETAINERS PRIMED AND PAINTED SIMILARLY.

FACES: 3/16" THICK FLAT WHITE LEXAN WITH 1ST SURFACE APPLIED VINYL AS FOLLOWS:

ENTIRE BACKGROUND: #230-59 DARK BROWN

SKY SEMI-CIRCLE SHAPE: #230-35 DARK BLUE

MOUNTAINS: #230-61 SLATE GREY

FURROWS: #230-49 BURGUNDY

ALL COPY AND CIRCULAR BACKGROUND FOR THE LOGO ARE WHITE LEXAN FACES SHOWING THROUGH.

TYPESTYLE: HELVETICA MEDIUM U & 1/C STD. SPACING FOR THE ADDRESS NUMERALS AND OPENED-UP SPACING FOR THE STREET NAMES IF ALLOWABLE

ILLUMINATION: FLUORESCENT INTERNAL 800 M.A. AS REQUIRED.

C-606
REPLACES
110



CITY OF
CHANDLER
STANDARD
DETAIL

INTERNALLY ILLUMINATED
STREET NAME SIGN

APPROVED:

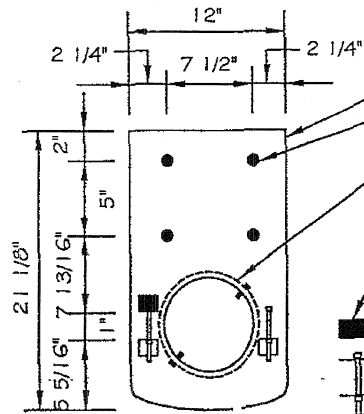
DATE: 11-19-99

CITY ENGINEER

DETAIL NO.

C-606

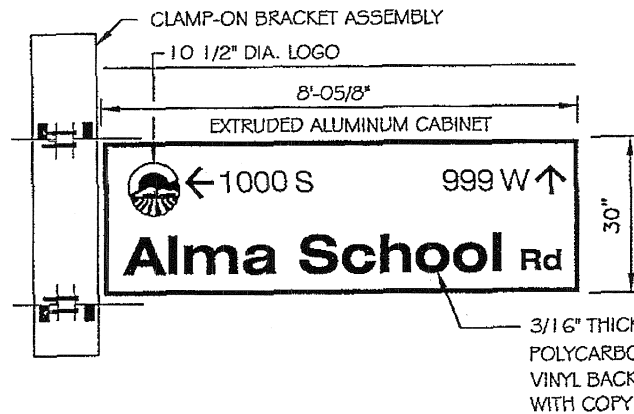
NTS



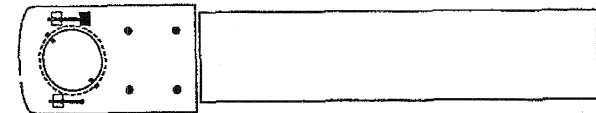
TOP VIEW

- 3/8" THICK STEEL PLATE, PAINTED BRUSHED ALUMINUM
- 3/4" DIA. X 1" SLOTTED HOLES (4 REQD.)
- EXISTING SIGNAL STRUCTURE PIPE, 8 5/8" DIA.
- 1/4" THICK TAB, 1 1/2" X 2" DRILLED AND TAPPED TO RECEIVE A 3/8" X 1-1/2" LONG BOLT. TAB TO BE WELDED TO PLATE (2 TYP)
- 1/2" PLATED BOLT 4" LONG WITH STEEL NUT WELDED TO FLANGE OF PLATE
- ANGLE CLIPS 2" X 2", 1 1/2" WIDE WELDED TO PLATE TOP AND BOTTOM

CHANDLER EXTENSION POLE



FRONT AND FACE DETAIL



TOP VIEW

C-607
REPLACES
110A

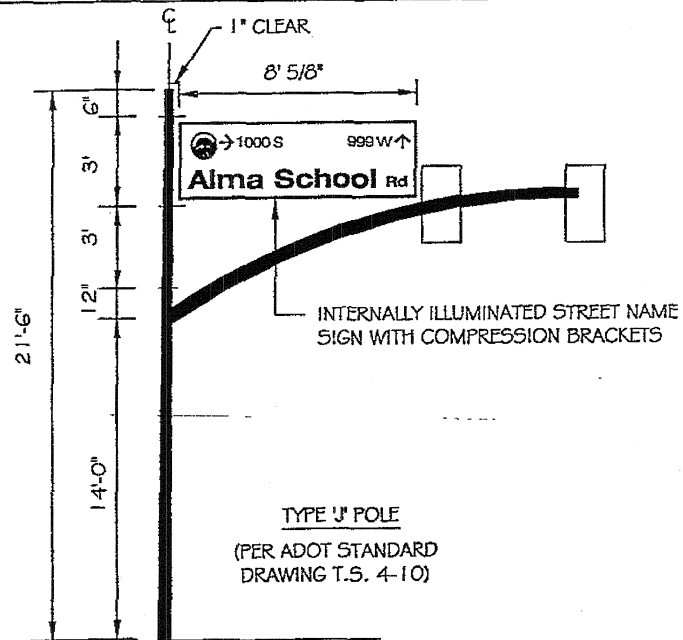


CITY OF
CHANDLER
STANDARD
DETAIL

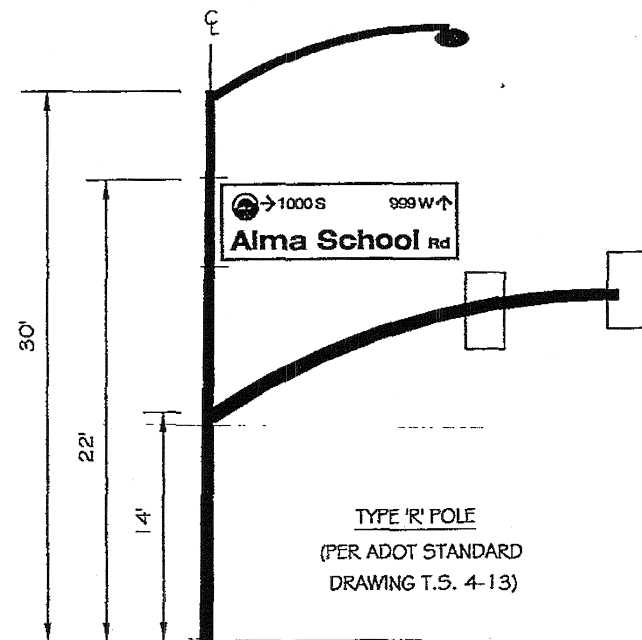
**INTERNALLY ILLUMINATED STREET
NAME SIGN - BRACKET ASSEMBLY**

APPROVED: *Bryant A. Patterson*
CITY ENGINEER
DATE: *11-19-99*

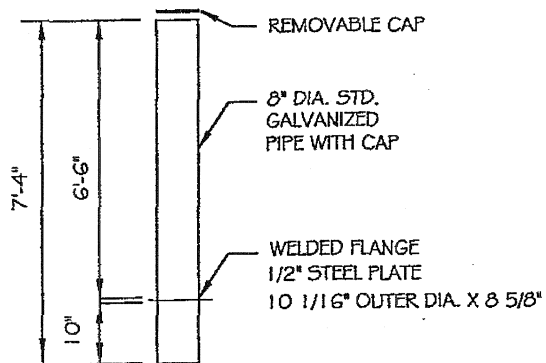
DETAIL NO.
C-607
NTS



ELEVATION



ELEVATION



EXTENSION BRACKET DETAIL

C-608
REPLACES
110B

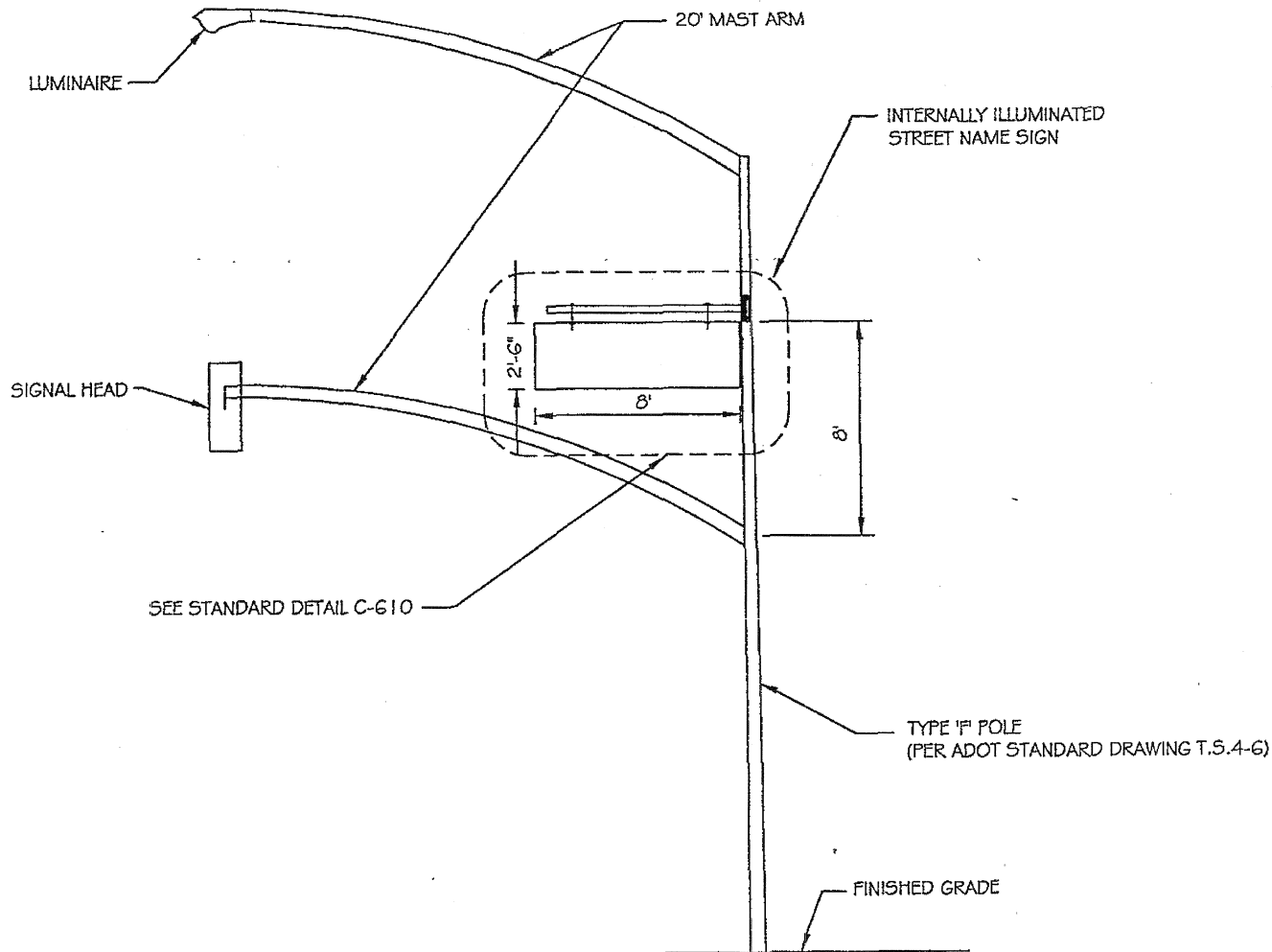


CITY OF
CHANDLER
STANDARD
DETAIL

**INTERNALLY ILLUMINATED STREET
NAME SIGN - J/R POLE MOUNTING**

APPROVED: *Bryan D. Patterson*
CITY ENGINEER
DATE: *11-19-99*

DETAIL NO.
C-608
NTS



C-609
REPLACES
110C

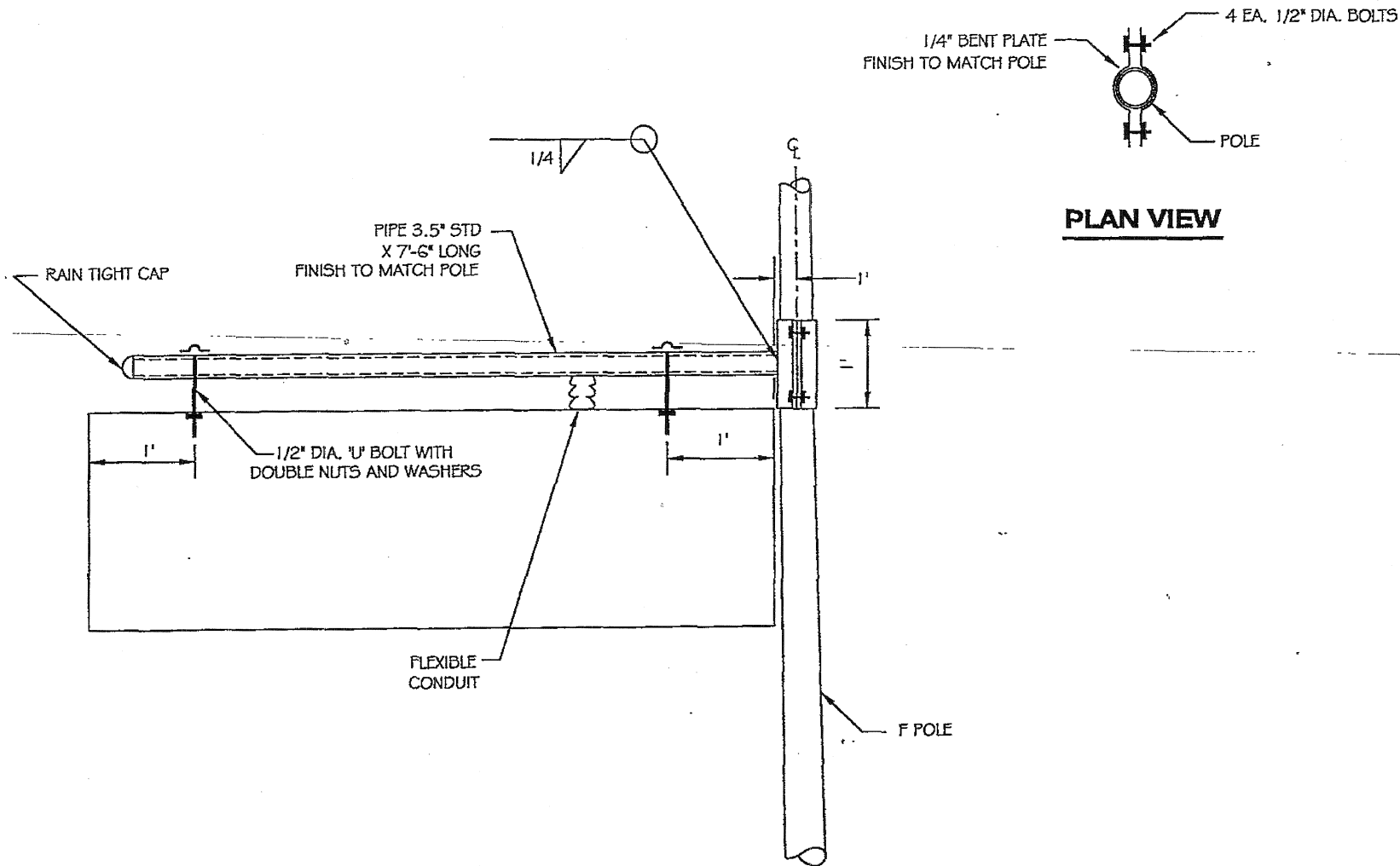


CITY OF
CHANDLER
STANDARD
DETAIL

**INTERNALLY ILLUMINATED STREET
NAME SIGN - F POLE MOUNTING**

APPROVED: *Ryan A. Patterson*
CITY ENGINEER
DATE: *11-19-99*

DETAIL NO.
C-609
NTS



NOTE:
FINISHED SIGN SHALL BE ABLE TO SWING ABOUT MAST.

C-610
REPLACES
110D



CITY OF
CHANDLER
STANDARD
DETAIL

**INTERNALLY ILLUMINATED
STREET NAME SIGN
F POLE MOUNTING DETAIL**

APPROVED: *Dwight A. Patterson*
CITY ENGINEER
DATE: *11-19-99*

DETAIL NO.
C-610
NTS

COLOR: BLUE COPY - WHITE BACKGROUND
USE HIGH INTENSITY GRADE REFLECTIVE SHEETING



C-611
REPLACES
60

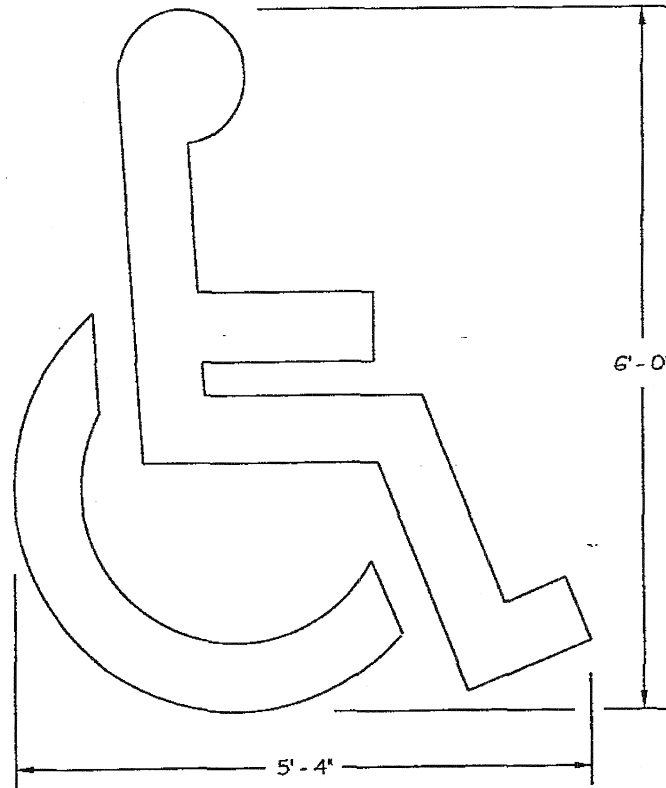


CITY OF
CHANDLER
STANDARD
DETAIL

HANDICAP PARKING SPACE SIGN

APPROVED: *Brian A. Patterson*
CITY ENGINEER
DATE: *11-19-99*

DETAIL NO.
C-611
NTS



NOTES:

1. PAVEMENT MARKINGS SHALL BE WHITE.
2. HANDICAPPED PARKING SPACE FOR A CAR SHALL BE 13 FEET WIDE AND 19 FEET LONG.
3. HANDICAPPED PARKING SPACE FOR A VAN SHALL BE 16 FEET WIDE AND 19 FEET LONG.

C-612
REPLACES
61



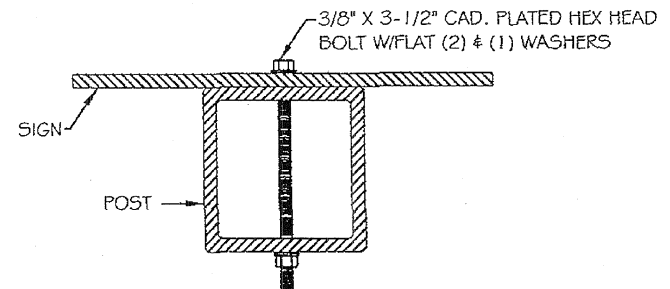
CITY OF
CHANDLER
STANDARD
DETAIL

**HANDICAP PAVEMENT
MARKING SYMBOL**

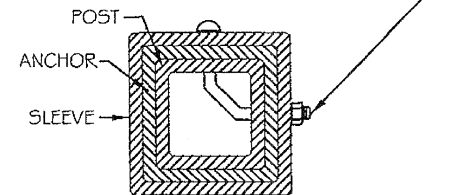
APPROVED: *[Signature]*
CITY ENGINEER
DATE: *11-19-99*

DETAIL NO.

C-612
NTS



1-9/16" X 1-3/16" THREADED -
X 5/16" DIA. CORNER BOLT
WITH 5/16" SELF LOCKING NUT

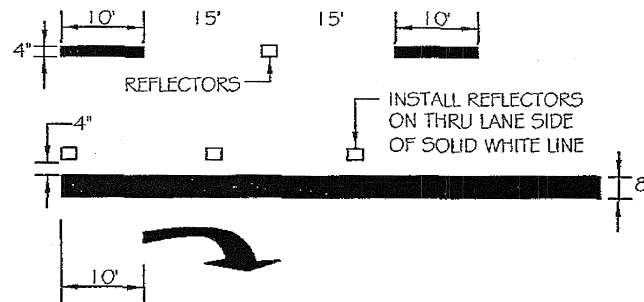


ANCHOR ASSEMBLY
DETAIL B

1. ANCHOR, SLEEVE AND POST ALL TO BE 1/2 GAUGE, .105 INCH GALVANIZED STEEL.
2. CONCRETE BASE FOUNDATION SHALL BE CLASS 'C' CONCRETE AS PER MAG STANDARD SPECIFICATIONS SEC. 505 + 725.
3. POST SHALL BE A MINIMUM LENGTH OF 11' AND SHALL BE INSERTED NOT LESS THAN 12" INTO THE ANCHOR.
POST WILL NEED TO BE 12' IN LENGTH FOR ALL 'WARNING' SIGN INSTALLATIONS.
4. THE FRONT AND BACK SIDES OF POST SHALL HAVE 7/16" HOLES PUNCHED ON 1" CENTERS FOR THE TOP 30" AND THE BOTTOM 12" ONLY.
5. ANCHOR SHALL HAVE HOLES PUNCHED FOR THE TOP 3" ONLY AND BOTTOM TAPED TO PREVENT CONCRETE FROM SEEPING IN DURING INSTALLATION.
6. THE POST SHALL HAVE NO HOLES AT THE TOP 30" WHEN INSTALLING STREET NAME SIGNS ONLY.

C-613
NTS

LANE LINE

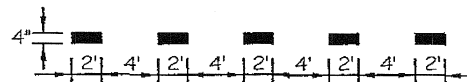


TURN LANE

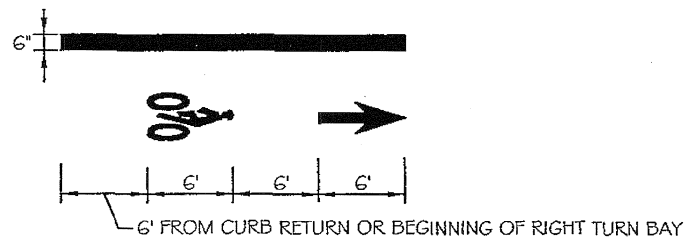
LANE DROP



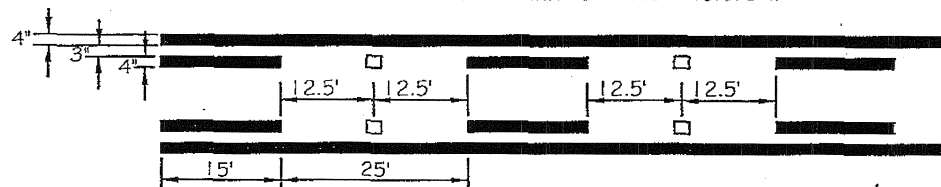
GUIDE LINES THRU INTERSECTIONS



BIKE LANE



TWO-WAY LEFT TURN LANE



DETAIL NO.

C-614

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

PAVEMENT MARKING DETAILS

APPROVED:

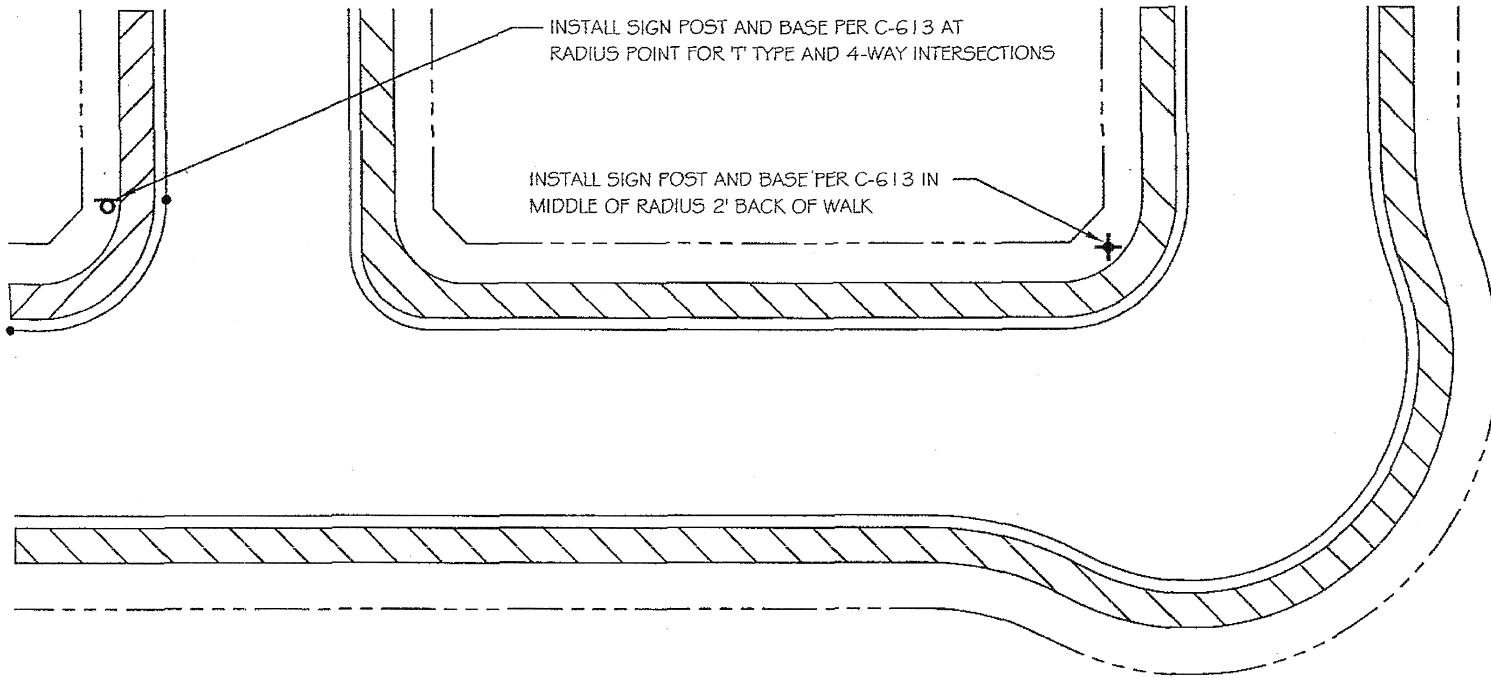
DATE:

Elizabeth A. [Signature]
CITY ENGINEER
January 11, 2002

DETAIL NO.

C-614

NTS



C-615



CITY OF
CHANDLER
STANDARD
DETAIL

**SIGN POST AND BASE LOCATIONS
FOR RESIDENTIAL STREETS**

APPROVED

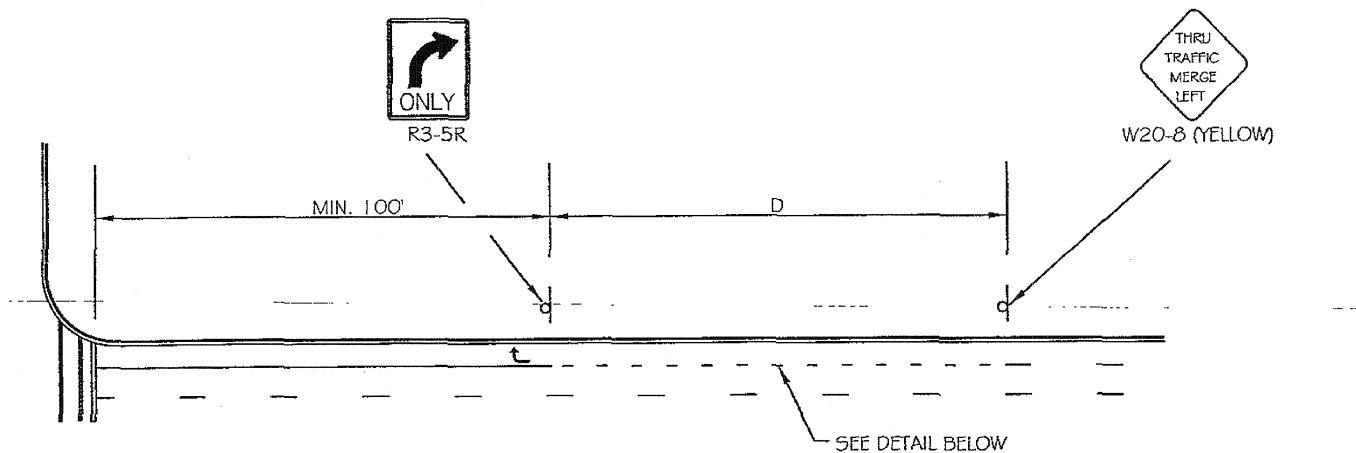
DATE:

Elizabeth W. Smith
CITY ENGINEER
January 11, 2002

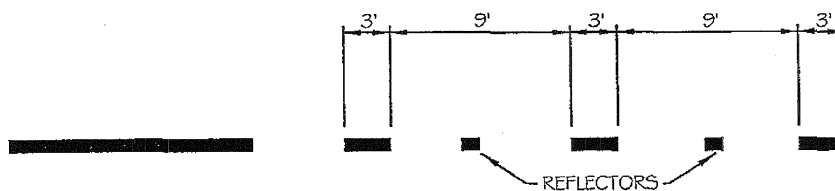
DETAIL NO.

C-615

NTS



SPEED LIMIT	D* (FT)
20	175
25	250
30	325
35	400
40	475
45	550
50	625
55	700
60	775



DETAIL A: FROM MUTCD FIGURE 3B-10

*FROM MUTCD TABLE 2C-4

DETAIL NO.

C-616

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

RIGHT TURN LANE DROP

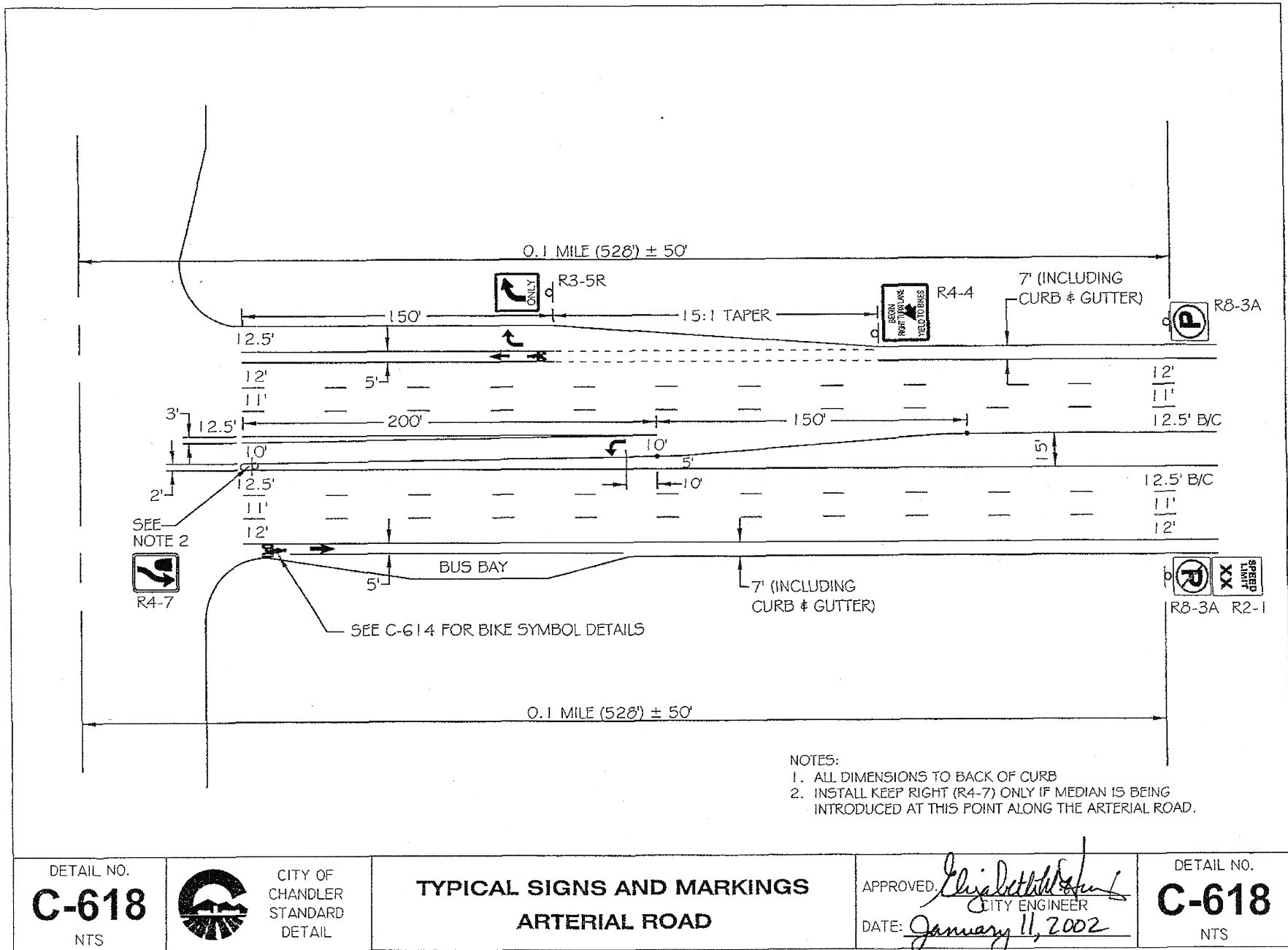
APPROVED


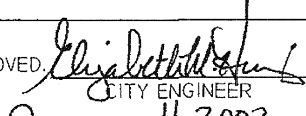
[Signature]
CITY ENGINEER
DATE: *January 11, 2002*

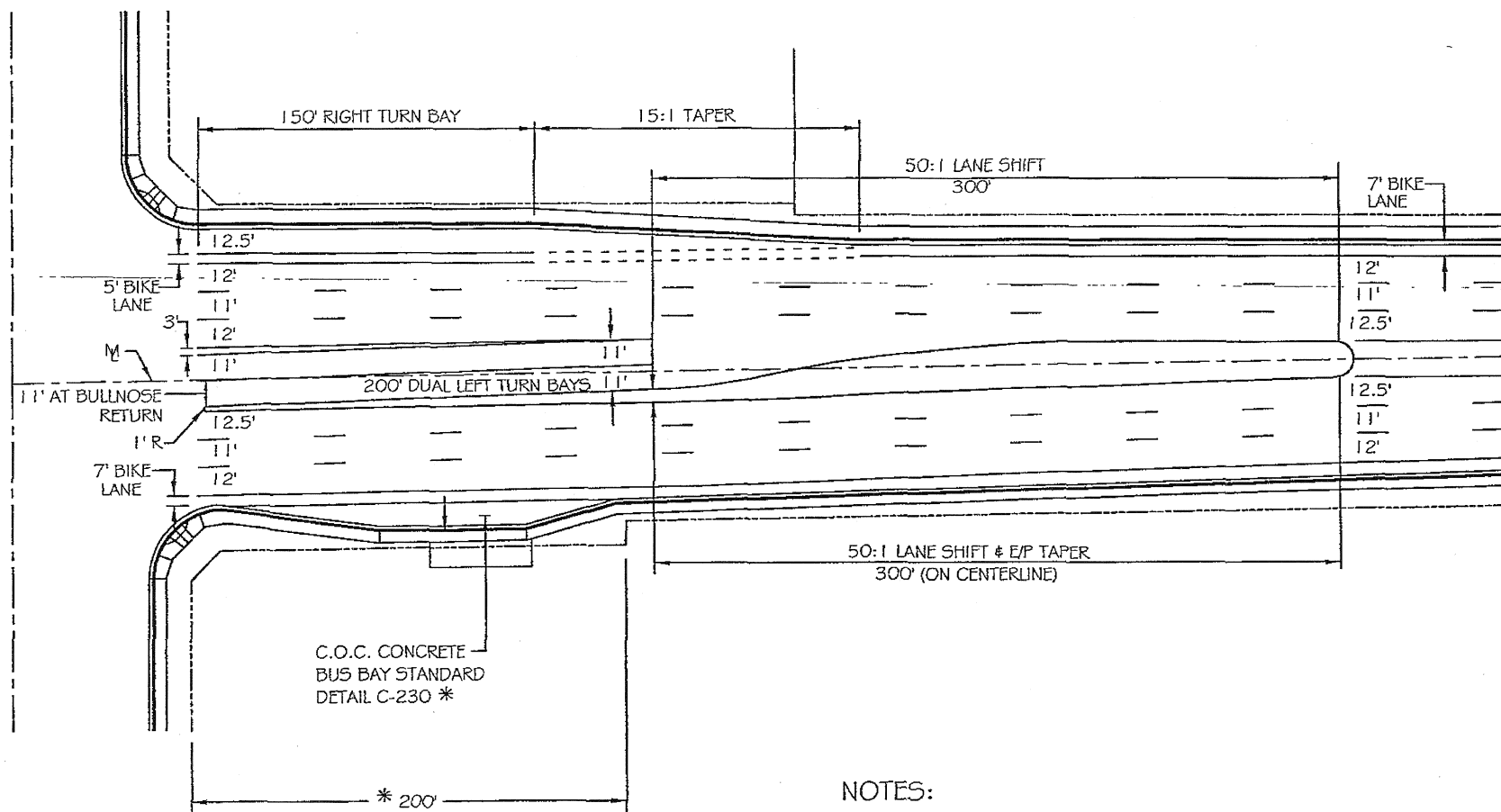
DETAIL NO.

C-616

NTS



DETAIL NO. C-618 NTS	 CITY OF CHANDLER STANDARD DETAIL	TYPICAL SIGNS AND MARKINGS ARTERIAL ROAD	APPROVED:  CITY ENGINEER DATE: <u>January 11, 2002</u>	DETAIL NO. C-618 NTS
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NOTES:

50 : 1 TAPERS FOR REDIRECTION OF THROUGH LANES

15 : 1 TAPERS FOR RIGHT TURN BAY APPROACHES

ALL DIMENSIONS TO BACK OF CURB OR CENTER OF LANE LINE
UNLESS OTHERWISE NOTED

DETAIL NO.

C-619

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

**TYPICAL LANE WIDTHS - ARTERIAL
ROAD WITH DOUBLE LEFT TURNS**

APPROVED

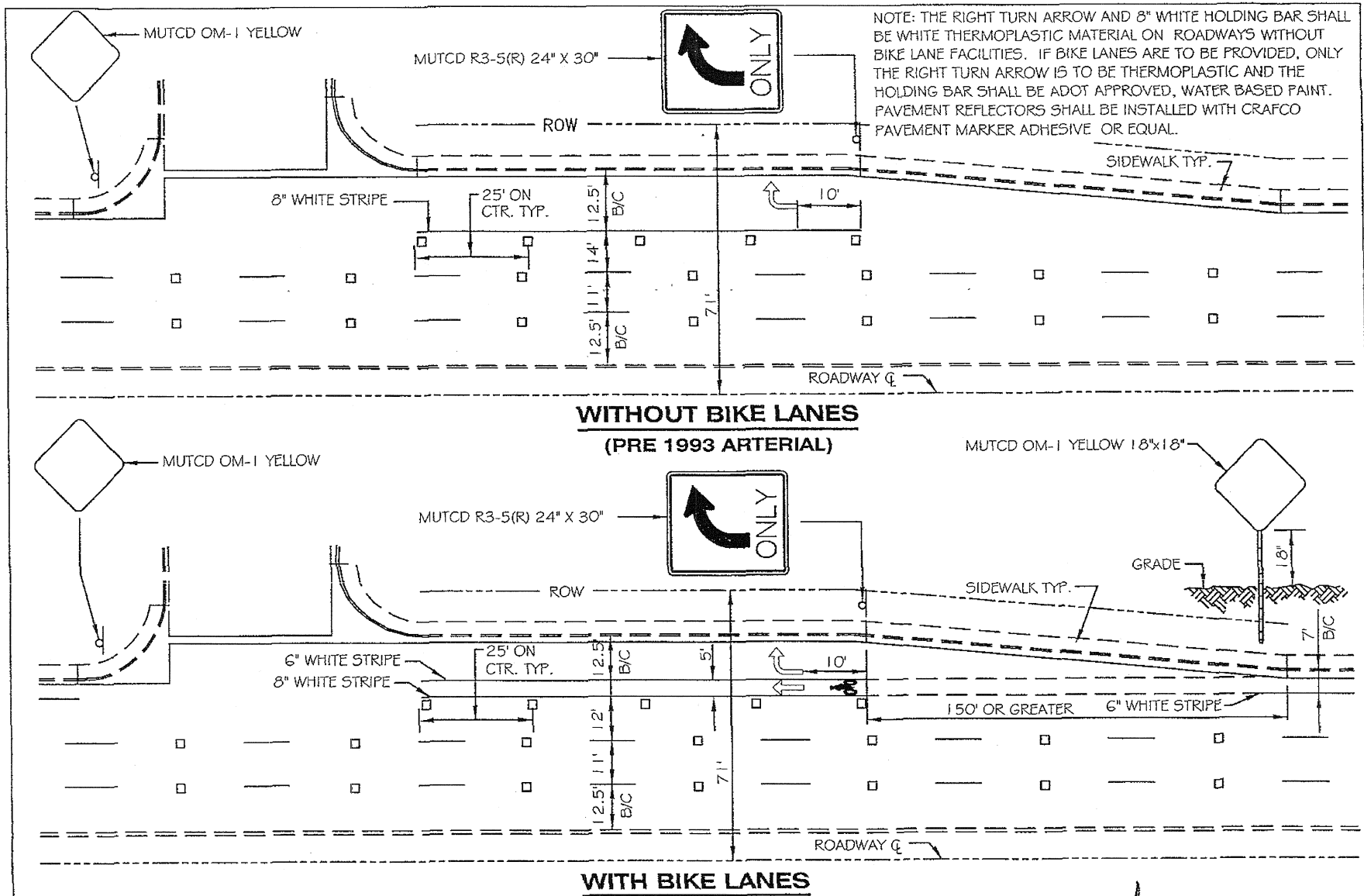
DATE



Eliza D. M. [Signature]
CITY ENGINEER
January 11, 2002

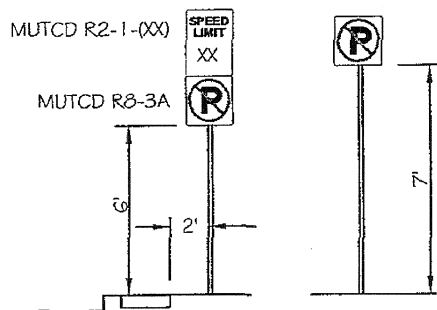
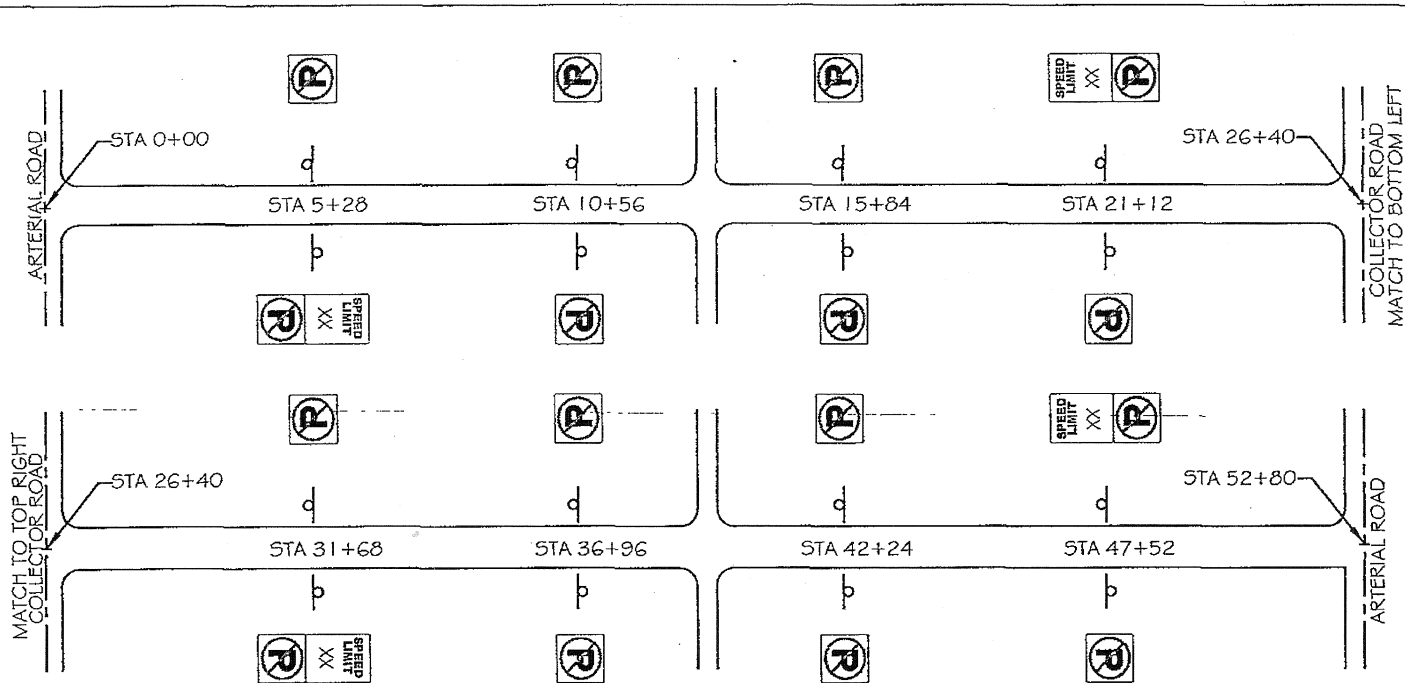
DETAIL NO.

C-619

NTS



DETAIL NO. C-620 NTS	 CITY OF CHANDLER STANDARD DETAIL	MAJOR ARTERIAL DECELERATION LANE SIGNING AND STRIPING	APPROVED:  CITY ENGINEER DATE: <u>January 11, 2002</u>	DETAIL NO. C-620 NTS
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NOTE: SIGNING SHOWN ONLY REPRESENTS THE PLACEMENT OF THE NO-PARKING AND SPEED LIMIT SIGNS. ADDITIONAL SIGNING MAY BE REQUIRED DEPENDING ON EACH INDIVIDUAL SITUATION.

THE SPACING OF THE NO-PARKING SIGNS SHOULD BE 528' (1/10 MILE) APART, BUT MAY VARY UP TO 50' IF SIGN CAN BE MOUNTED ONTO A EXISTING POLE OR A STREET LIGHT POLE.

NO-PARKING SIGNS SHALL BE 24"x24" UNLESS OTHERWISE NOTED.

SPEED LIMIT SHALL BE DETERMINED BY THE CITY ENGINEER AND THE SIGN SHALL BE 24"x30" IN SIZE. THERE SHALL BE 4 SPEED LIMIT SIGNS PER MILE AS SHOWN ABOVE.

DETAIL NO.

C-621

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

ARTERIAL SIGNAGE

APPROVED

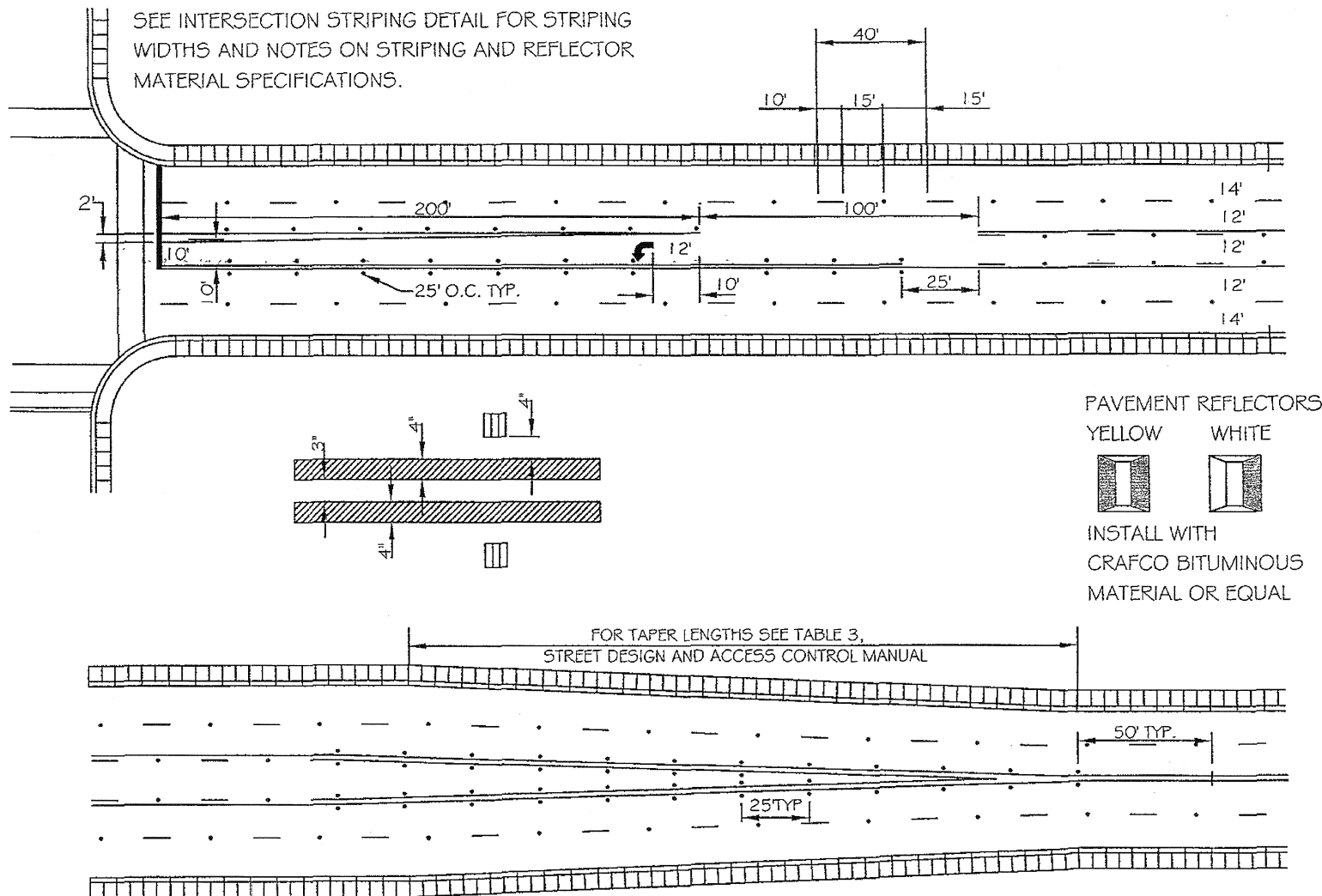
DATE:

Elizabeth Davis
CITY ENGINEER
January 11, 2002

DETAIL NO.

C-621

NTS



DETAIL NO.

C-622

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

**ARTERIAL ROADWAY MARKINGS
(W/O MEDIANS)**

APPROVED:

DATE:

Elizabeth M. King
CITY ENGINEER
January 11, 2002

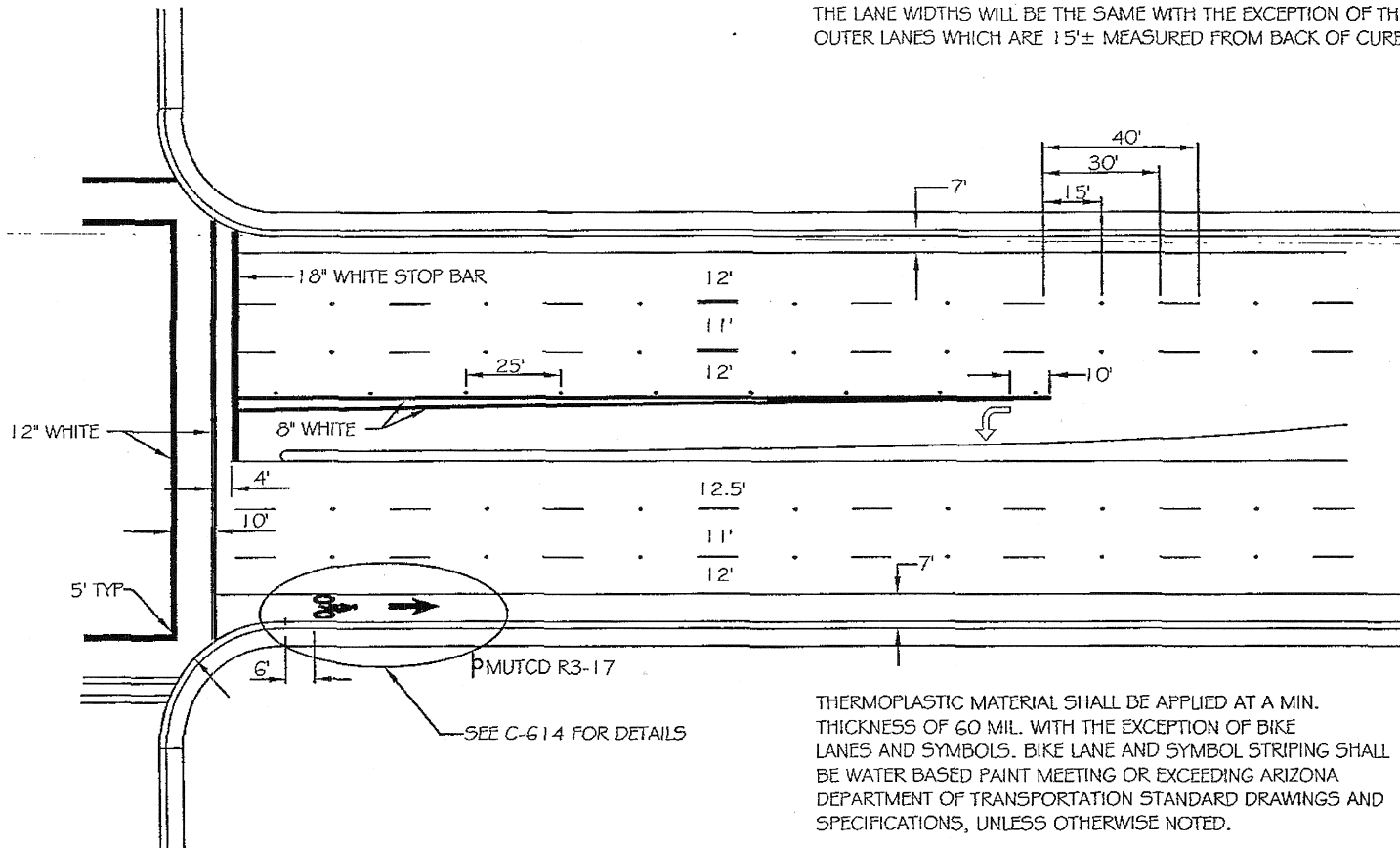
DETAIL NO.

C-622

NTS

CROSSWALK AND STOP BAR STRIPING SHALL ONLY BE STRIPED AT SIGNALIZED OR MULTI-WAY STOP CONTROLLED INTERSECTIONS, UNLESS OTHERWISE NOTED BY THE TRAFFIC ENGINEERING OFFICE.

ROADWAYS WITHOUT BIKE LANES WILL HAVE DIFFERENT CROSS-SECTION. THE LANE WIDTHS WILL BE THE SAME WITH THE EXCEPTION OF THE OUTER LANES WHICH ARE 15'± MEASURED FROM BACK OF CURB.



THERMOPLASTIC MATERIAL SHALL BE APPLIED AT A MIN. THICKNESS OF 60 MIL. WITH THE EXCEPTION OF BIKE LANES AND SYMBOLS. BIKE LANE AND SYMBOL STRIPING SHALL BE WATER BASED PAINT MEETING OR EXCEEDING ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.

PAVEMENT REFLECTORS SHALL BE INSTALLED WITH CRAFTCO PAVEMENT MARKER ADHESIVE, OR EQUAL. ALL PAVEMENT REFLECTORS SHALL BE WHITE WITH THE PRISMATIC REFLECTIVE SURFACE FACING ONCOMING TRAFFIC.

DETAIL NO.

C-623

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

INTERSECTION MARKINGS (WITH MEDIANS)

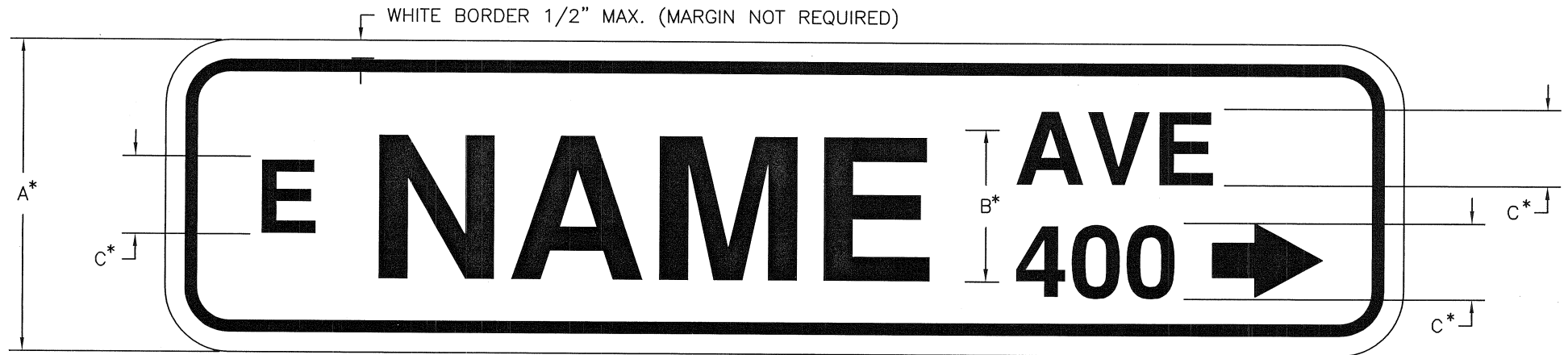
APPROVED:

Elizabeth B. [Signature]
CITY ENGINEER
DATE: *January 11, 2002*

DETAIL NO.

C-623

NTS



LAYOUT ONLY SEE BELOW FOR LETTER STYLE

1. LENGTH: DEPENDS ON LENGTH OF STREET NAME (LEGEND).
2. METAL: 6" FLAT, .080 GAUGE, 6061-T6 OR 5052-H3B ALLOY SHEET ALUMINUM.
3. REFLECTIVE SHEETING: COPY AND BACKGROUND MUST BE ENGINEER GRADE SCOTCHLITE REFLECTIVE MATERIAL.
4. LETTERS, NUMBERS, ETC. TO BE EITHER PRESSURE SENSITIVE OR SILK SCREENED PREFERRED AND MUST BE WITH 3-M INK.
5. LETTERS, NUMBERS AND SPACING SHALL BE PER U.S. DEPARTMENT OF TRANSPORTATION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS SERIES B.
6. COLOR: TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND GREEN AND THE COPY (BORDER AND LEGEND) WHITE WITH THE EXCEPTION OF PRIVATE STREETS WHICH SHALL HAVE A BLUE BACKGROUND.
7. SIGN PANELS SHALL BE FREE OF BUCKLES, WARPS, DENTS, COCKLES, BURPS AND DEFECTS RESULTING FROM FABRICATIONS AND SHIPPING.
8. PRESSURE SENSITIVE COPY MUST PROVIDE MINIMUM 5 YEAR DURABILITY WITH PREMATURE FAILURE DUE TO NATURAL WEATHERING OR SIGN TO BE REPLACED BY VENDOR AT NO CHARGE TO THE TOWN OF GILBERT. FAILURE IS INTERPRETED TO BE CRACKING OR PEELING OF BACKGROUND OR LEGEND FROM NORMAL WEATHERING.
9. THE SIGN MANUFACTURER SHALL SUBMIT A NOTARIZED CERTIFICATION OF COMPLIANCE TO THE TOWN OF GILBERT STATING THAT THE MANUFACTURE PROCEDURE AND THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE PROVISIONS.

10. DIMENSIONS		* DIMENSION (INCHES)		
STREET NAME DESCRIBES A:	INTERSECTS WITH A:	A	B	C
COLLECTOR/LOCAL	MAJOR ARTERIAL	8	6	3
COLLECTOR/LOCAL	COLLECTOR/LOCAL	6	4	2
MAJOR ARTERIAL	MAJOR ARTERIAL	8	6	3
MAJOR ARTERIAL	COLLECTOR/LOCAL	6	4	2

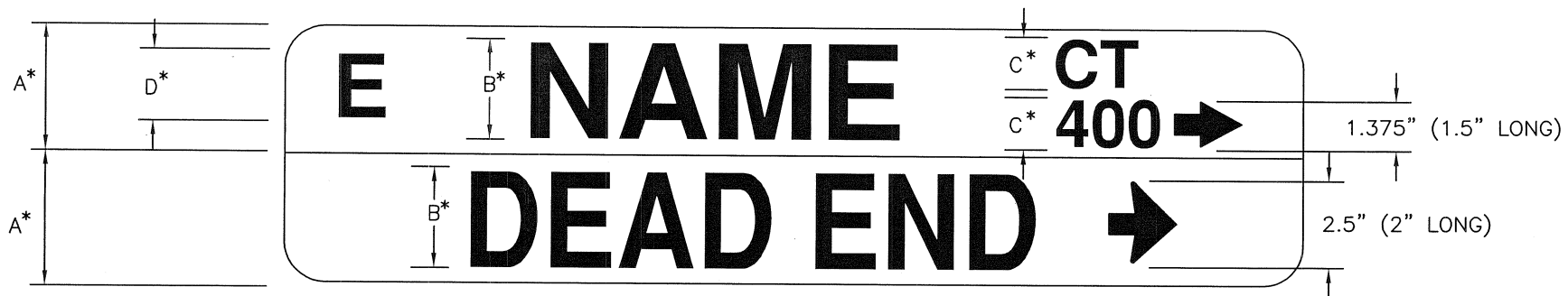
DETAIL NO.
70

TOWN OF GILBERT
STANDARD DETAIL

STREET SIGN

REVISED 7/15/96

DETAIL NO.
70



LAYOUT ONLY SEE BELOW FOR LETTER STYLE

1. LENGTH: DEPENDS ON LENGTH OF STREET NAME (LEGEND). AS A MINIMUM, 10" BLADES WITH 4" LETTERS SHALL BE USED AT ARTERIAL STREETS. FOR LARGER STREET NAMES, A 14" BLADE WITH 6" LETTERS SHALL BE USED.
2. METAL: 6" FLAT, .080 GAUGE, 6061-T6 OR 5052-H3B ALLOY SHEET ALUMINUM.
3. REFLECTIVE SHEETING: COPY AND BACKGROUND MUST BE ENGINEER GRADE SCOTCHLITE REFLECTIVE MATERIAL.
4. LETTERS, NUMBERS, ETC. TO BE EITHER PRESSURE SENSITIVE OR SILK SCREENED PREFERRED AND MUST BE WITH 3-M INK.
5. LETTERS, NUMBERS AND SPACING SHALL BE PER U.S. DEPARTMENT OF TRANSPORTATION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS SERIES B.
6. COLOR: TOP HALF OF SIGN TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND GREEN AND THE COPY BORDER AND LEGEND) WHITE. BOTTOM HALF OF SIGN TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND YELLOW AND THE COPY BLACK.
7. SIGN PANELS SHALL BE FREE OF BUCKLES, WARPS, DENTS, COCKLES, BURPS AND DEFECTS RESULTING FROM FABRICATIONS AND SHIPPING.
8. PRESSURE SENSITIVE COPY MUST PROVIDE MINIMUM 5 YEAR DURABILITY WITH PREMATURE FAILURE DUE TO NATURAL WEATHERING OR SIGN TO BE REPLACED BY VENDOR AT NO CHARGE TO THE TOWN OF GILBERT. FAILURE IS INTERPRETED TO BE CRACKING OR PEELING OF BACKGROUND OR LEGEND FROM NORMAL WEATHERING.
9. THE SIGN MANUFACTURER SHALL SUBMIT A NOTARIZED CERTIFICATION OF COMPLIANCE TO THE TOWN OF GILBERT STATING THAT THE MANUFACTURE PROCEDURE AND THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE PROVISIONS.
10. DIMENSIONS

		* DIMENSION (INCHES)			
STREET NAME DESCRIBES A:	INTERSECTS WITH A:	A	B	C	D
COLLECTOR/LOCAL	MAJOR ARTERIAL	6	4.5	2	3
COLLECTOR/LOCAL	COLLECTOR/LOCAL	4	3	1.5	2
MAJOR ARTERIAL	MAJOR ARTERIAL	6	4.5	2	3
MAJOR ARTERIAL	COLLECTOR/LOCAL	4	3	1.5	2

DETAIL NO.
71

TOWN OF GILBERT
STANDARD DETAIL

STREET SIGN w/ DEAD END

09/28/98

DETAIL NO.
71



LAYOUT ONLY SEE BELOW FOR LETTER STYLE

1. LENGTH: DEPENDS ON LENGTH OF STREET NAME (LEGEND). AS A MINIMUM, 10" BLADES WITH 4" LETTERS SHALL BE USED AT ARTERIAL STREETS. FOR LARGER STREET NAMES, A 14" BLADE WITH 6" LETTERS SHALL BE USED.
2. METAL: 6" FLAT, .080 GAUGE, 6061-T6 OR 5052-H3B ALLOY SHEET ALUMINUM.
3. REFLECTIVE SHEETING: COPY AND BACKGROUND MUST BE ENGINEER GRADE SCOTCHLITE REFLECTIVE MATERIAL.
4. LETTERS, NUMBERS, ETC. TO BE EITHER PRESSURE SENSITIVE OR SILK SCREENED PREFERRED AND MUST BE WITH 3-M INK.
5. LETTERS, NUMBERS AND SPACING SHALL BE PER U.S. DEPARTMENT OF TRANSPORTATION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS SERIES B.
6. COLOR: TOP HALF OF SIGN TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND GREEN AND THE COPY BORDER AND LEGEND) WHITE. BOTTOM HALF OF SIGN TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND YELLOW AND THE COPY BLACK.
7. SIGN PANELS SHALL BE FREE OF BUCKLES, WARPS, DENTS, COCKLES, BURPS AND DEFECTS RESULTING FROM FABRICATIONS AND SHIPPING.
8. PRESSURE SENSITIVE COPY MUST PROVIDE MINIMUM 5 YEAR DURABILITY WITH PREMATURE FAILURE DUE TO NATURAL WEATHERING OR SIGN TO BE REPLACED BY VENDOR AT NO CHARGE TO THE TOWN OF GILBERT. FAILURE IS INTERPRETED TO BE CRACKING OR PEELING OF BACKGROUND OR LEGEND FROM NORMAL WEATHERING.
9. THE SIGN MANUFACTURER SHALL SUBMIT A NOTARIZED CERTIFICATION OF COMPLIANCE TO THE TOWN OF GILBERT STATING THAT THE MANUFACTURE PROCEDURE AND THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE PROVISIONS.
10. DIMENSIONS

* DIMENSION (INCHES)

STREET NAME DESCRIBES A:	INTERSECTS WITH A:	A	B	C	D
COLLECTOR/LOCAL	MAJOR ARTERIAL	6	4.5	2	3
COLLECTOR/LOCAL	COLLECTOR/LOCAL	4	3	1.5	2
MAJOR ARTERIAL	MAJOR ARTERIAL	6	4.5	2	3
MAJOR ARTERIAL	COLLECTOR/LOCAL	4	3	1.5	2

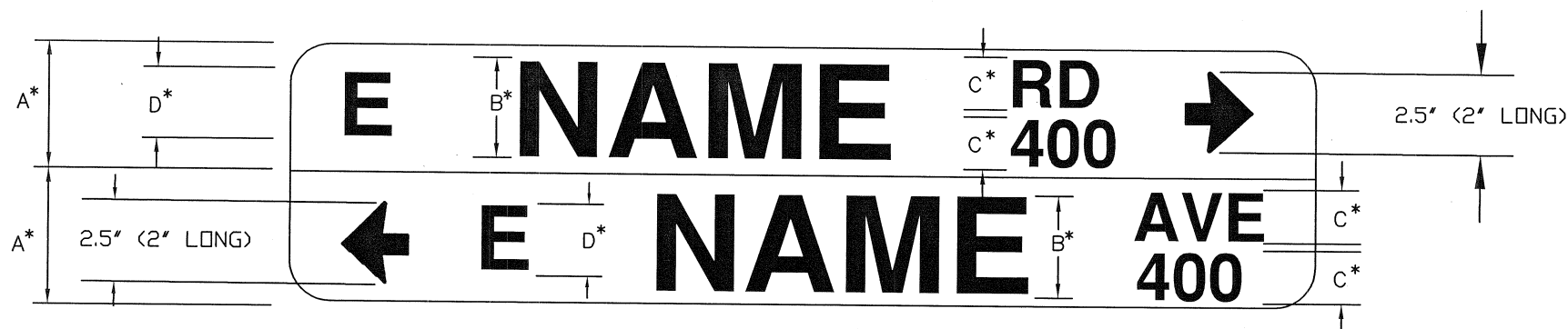
DETAIL NO.
71A

TOWN OF GILBERT
STANDARD DETAIL

STREET SIGN w/ NO OUTLET

06/12/02

DETAIL NO.
71A



LAYOUT ONLY SEE BELOW FOR LETTER STYLE

1. LENGTH: DEPENDS ON LENGTH OF STREET NAME (LEGEND).
2. METAL: 6" FLAT, .080 GAUGE, 6061-T6 OR 5052-H3B ALLOY SHEET ALUMINUM.
3. REFLECTIVE SHEETING: COPY AND BACKGROUND MUST BE ENGINEER GRADE SCOTCHLITE REFLECTIVE MATERIAL.
4. LETTERS, NUMBERS, ETC. TO BE EITHER PRESSURE SENSITIVE OR SILK SCREENED PREFERRED AND MUST BE WITH 3-M INK.
5. LETTERS, NUMBERS AND SPACING SHALL BE PER U.S. DEPARTMENT OF TRANSPORTATION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS SERIES B.
6. COLOR TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND GREEN AND THE COPY (BORDER AND LEGEND WHITE).
7. SIGN PANELS SHALL BE FREE OF BUCKLES, WARPS, DENTS, COCKLES, BURPS AND DEFECTS RESULTING FROM FABRICATIONS AND SHIPPING.
8. PRESSURE SENSITIVE COPY MUST PROVIDE MINIMUM 5 YEAR DURABILITY WITH PREMATURE FAILURE DUE TO NATURAL WEATHERING OR SIGN TO BE REPLACED BY VENDOR AT NO CHARGE TO THE TOWN OF GILBERT. FAILURE IS INTERPRETED TO BE CRACKING OR PEELING OF BACKGROUND OR LEGEND FROM NORMAL WEATHERING.
9. THE SIGN MANUFACTURER SHALL SUBMIT A NOTARIZED CERTIFICATION OF COMPLIANCE TO THE TOWN OF GILBERT STATING THAT THE MANUFACTURE PROCEDURE AND THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE PROVISIONS.

10. DIMENSIONS

* DIMENSION (INCHES)

STREET NAME DESCRIBES A:	INTERSECTS WITH A:	A	B	C	D
COLLECTOR/LOCAL	MAJOR ARTERIAL	6	4.5	2	3
COLLECTOR/LOCAL	COLLECTOR/LOCAL	4	3	1.5	2
MAJOR ARTERIAL	MAJOR ARTERIAL	6	4.5	2	3
MAJOR ARTERIAL	COLLECTOR/LOCAL	4	3	1.5	2

DETAIL NO.
72

TOWN OF GILBERT
STANDARD DETAIL

STREET SIGN
STREET NAME CHANGE AT INTERSECTION

4/1/99

DETAIL NO.
72

WHITE BORDER 1/2" MAX. (MARGIN NOT REQUIRED)



1. LENGTH: DEPENDS ON LENGTH OF STREET NAME (LEGEND).
2. METAL: 6" FLAT, .080 GAUGE, 6061-T6 OR 5052-H3B ALLOY SHEET ALUMINUM.
3. REFLECTIVE SHEETING: COPY AND BACKGROUND MUST BE ENGINEER GRADE SCOTCHLITE REFLECTIVE MATERIAL.
4. LETTERS, NUMBERS, ETC. TO BE EITHER PRESSURE SENSITIVE OR SILK SCREENED PREFERRED AND MUST BE WITH 3-M INK.
5. LETTERS, NUMBERS AND SPACING SHALL BE PER U.S. DEPARTMENT OF TRANSPORTATION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS SERIES B.
6. COLOR: TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND BLUE AND THE COPY (BORDER AND LEGEND) WHITE

7. SIGN PANELS SHALL BE FREE OF BUCKLES, WARPS, DENTS, COCKLES, BURPS AND DEFECTS RESULTING FROM FABRICATIONS AND SHIPPING.
8. PRESSURE SENSITIVE COPY MUST PROVIDE MINIMUM 5 YEAR DURABILITY WITH PREMATURE FAILURE DUE TO NATURAL WEATHERING OR SIGN TO BE REPLACED BY VENDOR AT NO CHARGE TO THE TOWN OF GILBERT. FAILURE IS INTERPRETED TO BE CRACKING OR PEELING OF BACKGROUND OR LEGEND FROM NORMAL WEATHERING.
9. THE SIGN MANUFACTURER SHALL SUBMIT A NOTARIZED CERTIFICATION OF COMPLIANCE TO THE TOWN OF GILBERT STATING THAT THE MANUFACTURE PROCEDURE AND THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE PROVISIONS.

10. DIMENSIONS

* DIMENSION (INCHES)

STREET NAME DESCRIBES A:	INTERSECTS WITH A:	A	B	C
COLLECTOR/LOCAL	MAJOR ARTERIAL	8	6	3
COLLECTOR/LOCAL	COLLECTOR/LOCAL	6	4	2
MAJOR ARTERIAL	MAJOR ARTERIAL	8	6	3
MAJOR ARTERIAL	COLLECTOR/LOCAL	6	4	2

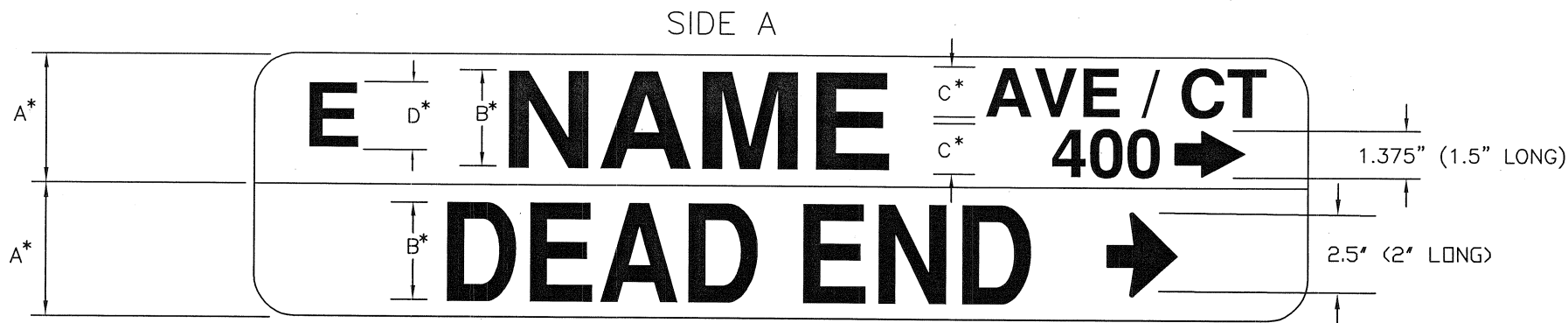
DETAIL NO.
72A

TOWN OF GILBERT
STANDARD DETAIL

STREET SIGN
PRIVATE STREETS

REVISED

DETAIL NO.
72A



LAYOUT ONLY SEE BELOW FOR LETTER STYLE

1. LENGTH: DEPENDS ON LENGTH OF STREET NAME (LEGEND).
2. METAL: 6" FLAT, .080 GAUGE, 6061-T6 OR 5052-H3B ALLOY SHEET ALUMINUM.
3. REFLECTIVE SHEETING: COPY AND BACKGROUND MUST ENGINEER GRADE SCOTCHLITE REFLECTIVE MATERIAL.
4. LETTERS, NUMBERS, ETC. TO BE EITHER PRESSURE SENSITIVE OR SILK SCREENED PREFERRED AND MUST BE WITH 3-M INK.
5. LETTERS, NUMBERS AND SPACING SHALL BE PER U.S. DEPARTMENT OF TRANSPORTATION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS SERIES B.
6. COLOR: TO BE PER LATEST ADOT STANDARDS WITH THE BACKGROUND GREEN AND THE COPY (BORDER AND LEGEND) WHITE.
7. SIGN PANELS SHALL BE FREE OF BUCKLES, WARPS, DENTS, COCKLES, BURPS AND DEFECTS RESULTING FROM FABRICATIONS AND SHIPPING.
8. PRESSURE SENSITIVE COPY MUST PROVIDE MINIMUM 5 YEAR DURABILITY WITH FAILURE DUE TO NATURAL WEATHERING OR SIGN TO BE REPLACED BY VENDOR AT NO CHARGE TO THE TOWN OF GILBERT. FAILURE IS INTERPRETED TO BE CRACKING OR PEELING OF BACKGROUND OR LEGEND FROM NORMAL WEATHERING.
9. THE SIGN MANUFACTURER SHALL SUBMIT A NOTARIZED CERTIFICATION OF COMPLIANCE TO THE TOWN OF GILBERT STATING THAT THE MANUFACTURE PROCEDURE AND THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE PROVISION.
10. SIDE A INDICATES THAT THE CUL-DE-SAC IS ON THE RIGHT SIDE AND SIDE B TO BE ON THE OPPOSITE SIDE OF THE SIGN INDICATES THAT THE CUL-DE-SAC IS ON THE LEFT SIDE.
11. DIMENSIONS

		* DIMENSION (INCHES)		
STREET NAME DESCRIBES A:	INTERSECTS WITH A:	A	B	C
COLLECTOR/LOCAL	MAJOR ARTERIAL	8	6	3
COLLECTOR/LOCAL	COLLECTOR/LOCAL	6	4	2
MAJOR ARTERIAL	MAJOR ARTERIAL	8	6	3
MAJOR ARTERIAL	COLLECTOR/LOCAL	6	4	2

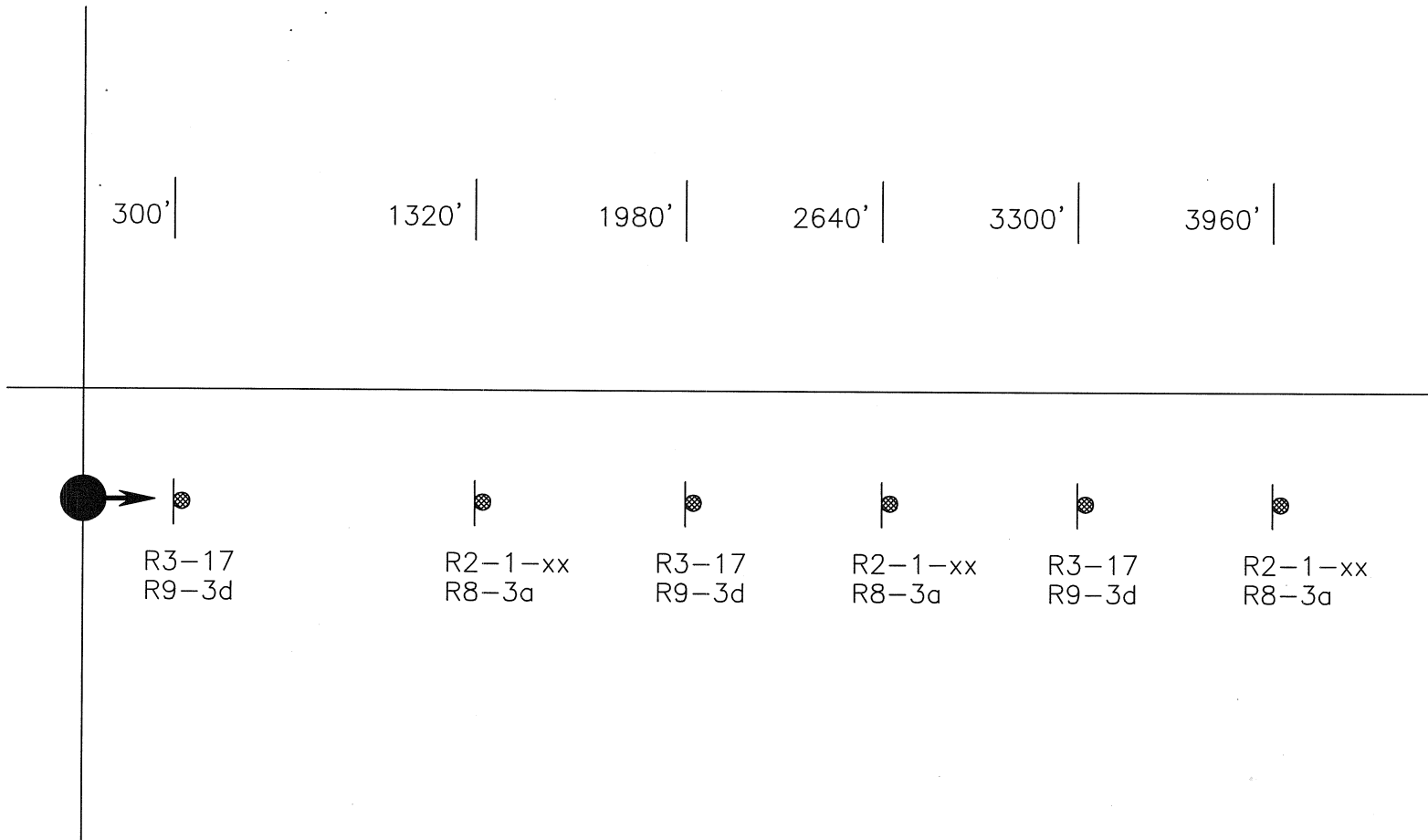
DETAIL NO.
73

TOWN OF GILBERT
STANDARD DETAIL

STREET SIGN
CUL-DE-SAC INTERSECTION

4/6/99

DETAIL NO.
73



DETAIL NO.
77a

TOWN OF GILBERT
STANDARD DETAIL

TYPICAL ARTERIAL SIGNING

CREATED 12/08/99

DETAIL NO.
77a



S1-1
S4-3
R2-1-35
S4-1



S4-3
R2-1-35
S4-1
S1-1

DETAIL NO.
77b

TOWN OF GILBERT
STANDARD DETAIL

SCHOOL AREA SIGNING

CREATED 12/17/99

DETAIL NO.
77b

TRAFFIC ENGINEERING SIGNING PLAN GENERAL NOTES

THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC SIGNING

1. The contractor installing signing with the Town's right-of-way will be required to obtain a signing installation permit 15 days prior to any installation.
2. The signing contractor shall make contact with the Traffic Engineering Section at 480-503-6186 to arrange for a pre-installation meeting. No signing is to be installed prior to meeting with a representative from the Traffic Engineering Section.
3. All signing shall conform to the requirements contained in the Millennium Edition of the Manual on Uniform Traffic Control Devices Handbook, and the Arizona Supplement published by the Arizona Department of Transportation (June 1, 2003).
4. All signs shall be installed using 1 3/4 "square tubing as per Town of Gilbert Standard Detail 79.
5. Signs shall be secured to post using 3/8" x 3" plated hex head bolts with flat washers (2 each) and nylon stop nuts.
6. Signs that are required to be removed or relocated during construction will be the responsibility of the contractor. Any signing that is to be relocated or removed due to construction shall be reinstalled in its final location per Town of Gilbert Standard Detail 79.
7. The contractor shall allow the concrete in the postholes to cure for at least 24-hours prior to standing the poles and hanging any signing.
8. The contractor shall ensure that at no time a traffic sign is installed in such a way as to be blocked by trees or any type of vegetation. In these cases, the contractor shall contact the Traffic Engineering Section at 480-503-6186 to provide an alternative location for the installation of signing in question.

DETAIL NO. 200A	TOWN OF GILBERT STANDARD DETAIL	SIGNING GENERAL NOTES	REVISED	DETAIL NO. 200A
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TRAFFIC ENGINEERING SIGNING PLAN GENERAL NOTES

THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC SIGNING

1. Any signing that is to be affixed to a street light pole shall be done so using $\frac{3}{4}$ " wide banding with appropriate fasteners.
2. Any signing installed within the Town's right-of-way shall be installed by an individual that has current certification in signing installation or inspection from American Traffic Safety Services Association (ATSSA) or the International Municipal Signal Association (IMSA). Equivalents will be considered but must be submitted in writing to the Traffic Engineer 30-days prior to installation of any signing.
3. Signing quantities and installation locations are subject to change at the time of installation based upon current accepted practice. The contractor completing the signing installation shall make contact with the Traffic Engineering Section prior to any signing being installed within the Town's right-of-way.

DETAIL NO. 200B	TOWN OF GILBERT STANDARD DETAIL	SIGNING GENERAL NOTES	REVISED	DETAIL NO. 200B
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TRAFFIC ENGINEERING SIGNING PLAN GENERAL NOTES

THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC SIGNING

Sign Sheeting Standards

All signing will incorporate ASTM Type IV (High Intensity) sheeting as a minimum with the following exceptions:

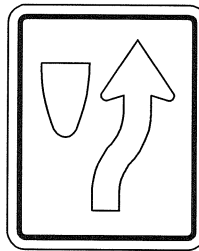
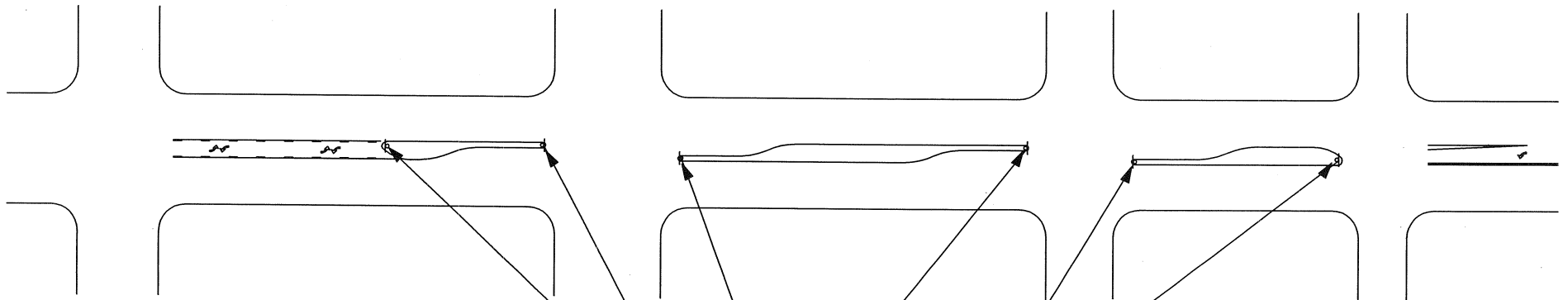
1. All Warning signs (yellow series) shall be ASTM Type XI (fluorescent yellow sheeting).
2. All STOP signs and supplementary signing (STOP AHEAD, attached plaques, etc.) shall be ASTM Type XI sheeting.
3. Street Name signs:
 - a. Any arterial street intersection (all blades) shall be ASTM TYPE IX sheeting
 - b. All other intersections shall be ASTM Type IV sheeting
1. All overhead internally illuminated street name signs shall be ASTM Type XI sheeting
2. All median end signing (R4-7) shall be ASTM Type XI sheeting
3. All School Area signing shall be ASTM Type XI sheeting (fluorescent yellow-green)

All signing specified to be ASTM Type IV (high intensity) shall be 3M sheeting or equivalent, to include the same warranty period.

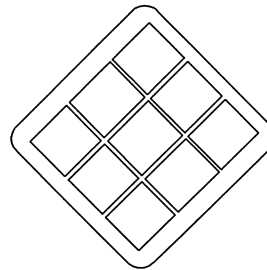
All signing specified to be ASTM Type XI shall be 3M sheeting or equivalent, to include the same warranty period.

Any request to use sheeting other than that specified above shall be made in writing to the Traffic Engineer 30 days in advance of installation.

DETAIL NO. 200C	TOWN OF GILBERT STANDARD DETAIL	SIGNING GENERAL NOTES	REVISED	DETAIL NO. 200C
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(R4-7)



(TYPE 1 OBJECT MARKER)

DETAIL NO.
201B

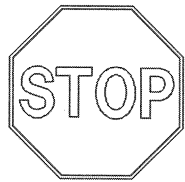
TOWN OF GILBERT
STANDARD DETAIL

CONTINUOUS MEDIAN AND SIGNING

REVISED

DETAIL NO.
201B

1

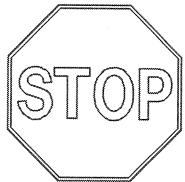


R1-1 (NEW)



R1-3 (NEW)

2

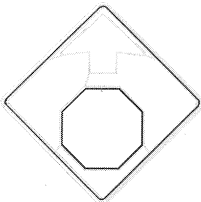


R1-1 (EXISTING)



ADDING R1-3
PLATE ONLY

3



4



NOTE:

FOR WARNING SIGN SPACING SEE "A GUIDE
FOR ADVANCE WARNING SIGN PLACEMENT
DISTANCE" MUTCD PIEV CHART.

4

2

4

3

1

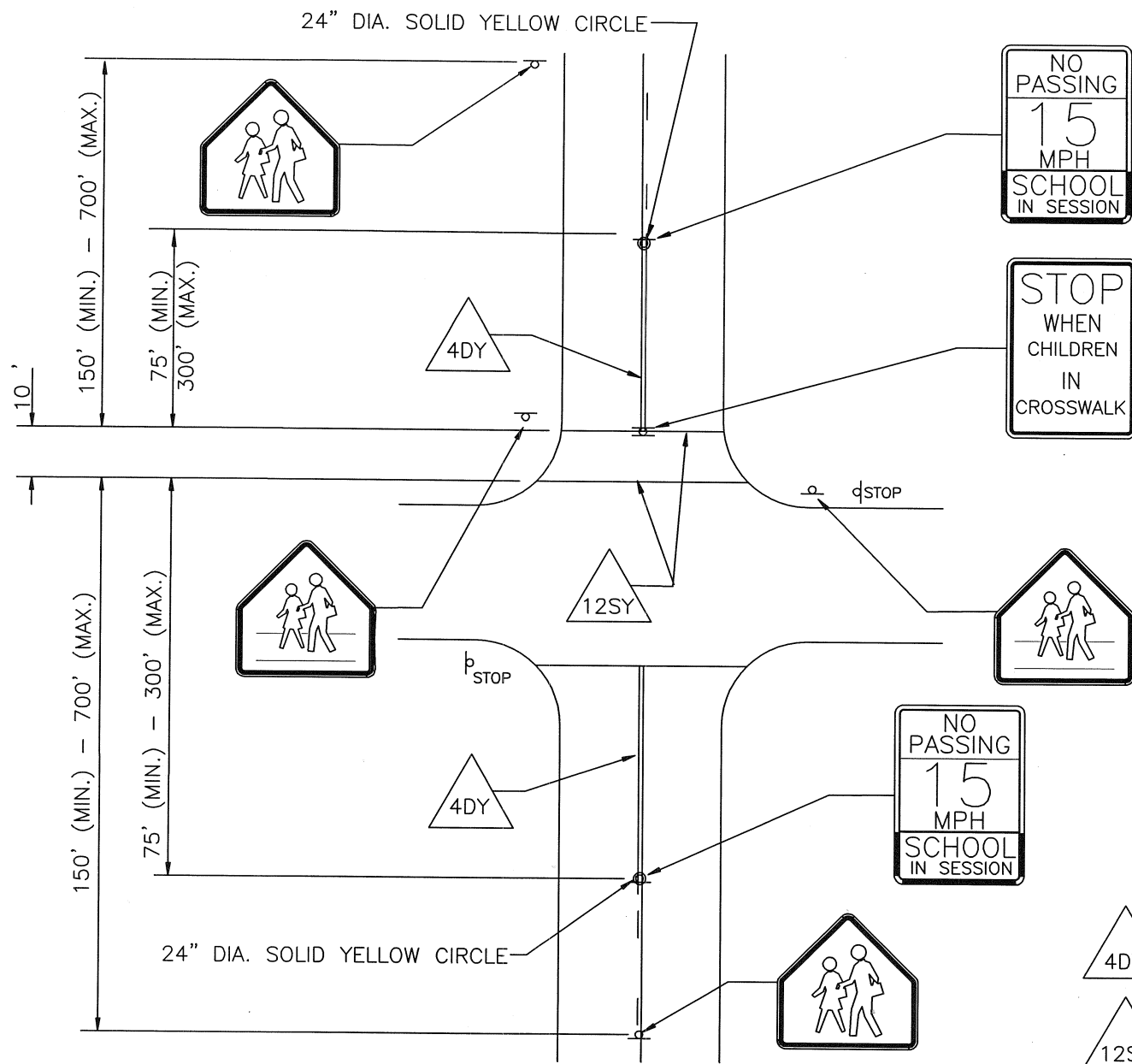
1

3

4

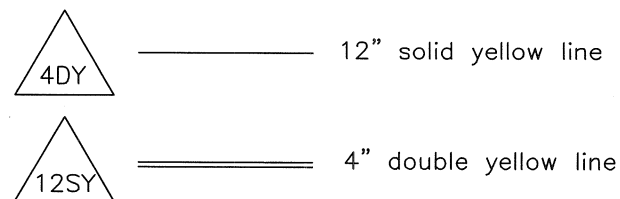
2

4



NOTES:

1. NO PASSING ZONES SHALL BE INSTALLED PER MUTCD GUIDE-LINES . FINAL LAYOUT SHALL BE CHECKED BY THE TOWN TRAFFIC ENGINEER OR HIS REPRESENTATIVE
2. NO CROSSWALKS SHALL BE INSTALLED WITHOUT A STUDY AND FINAL APPROVAL IS GIVEN BY THE TOWN TRAFFIC ENGINEER OR HIS REPRESENTATIVE.
3. EXACT DISTANCES OF SIGN IS BASED ON THE SPEED LIMIT.
4. NO PARKING ALLOWED BETWEEN SPEED SIGNS.



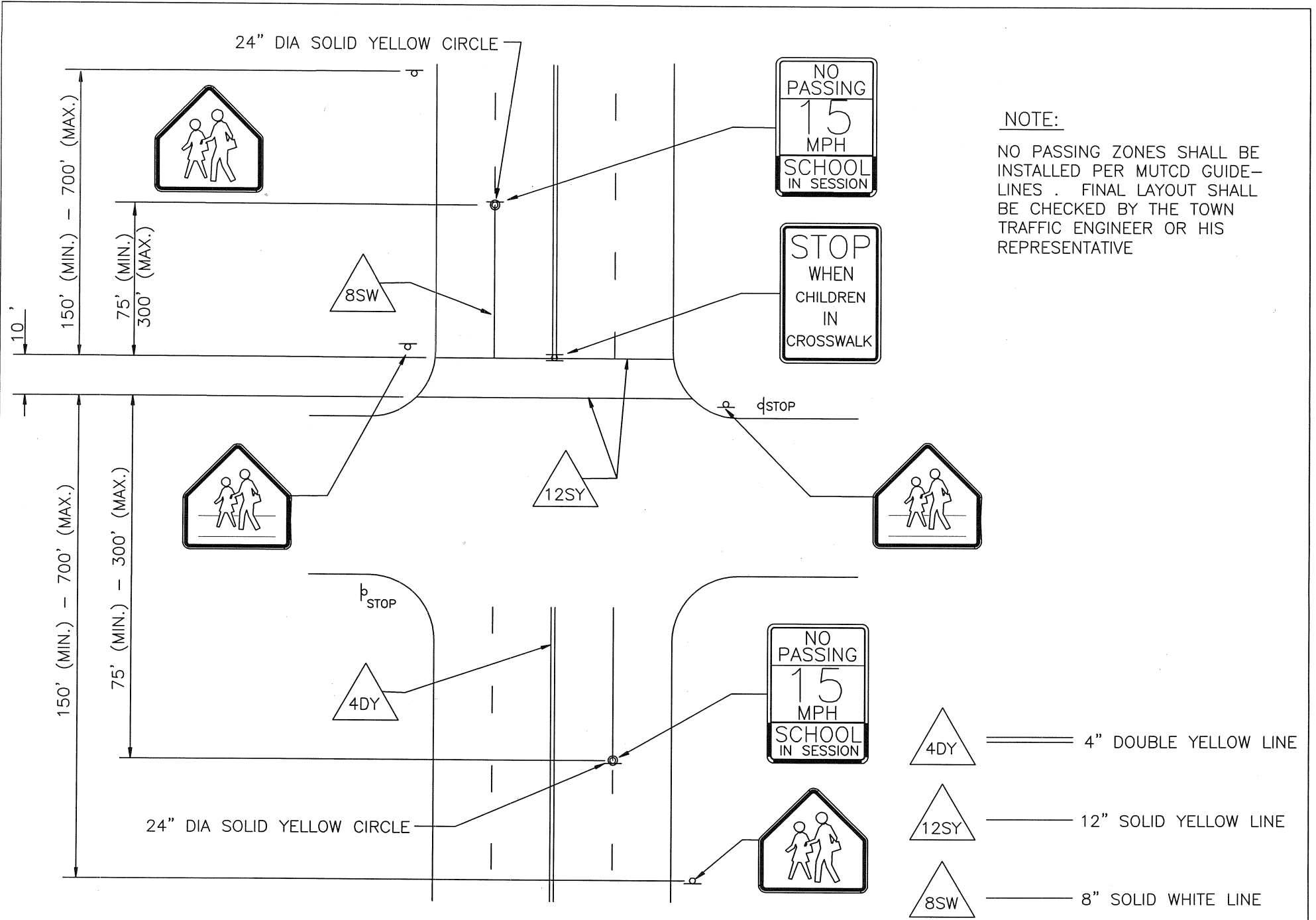
DETAIL NO.
203A

TOWN OF GILBERT
STANDARD DETAIL

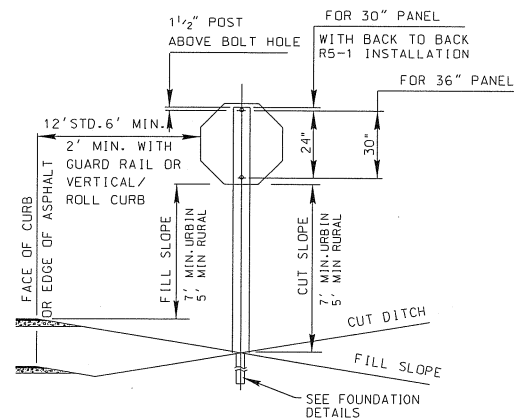
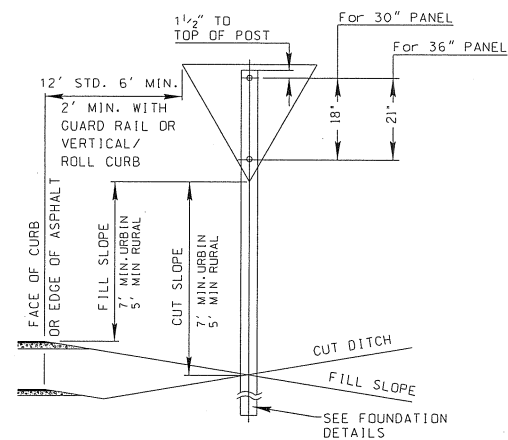
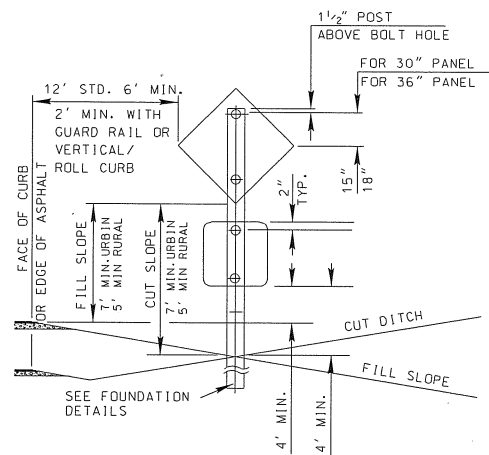
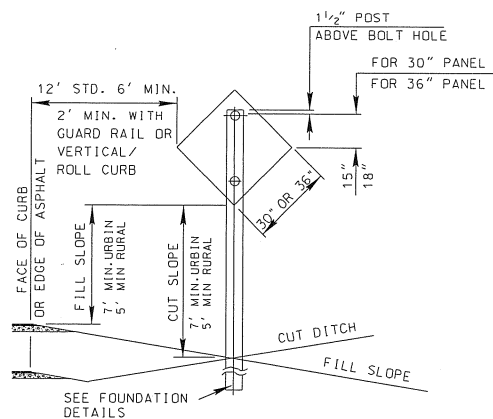
SCHOOL CROSSWALKS
(2 LANE - 2 WAY)

REVISED

DETAIL NO.
203A

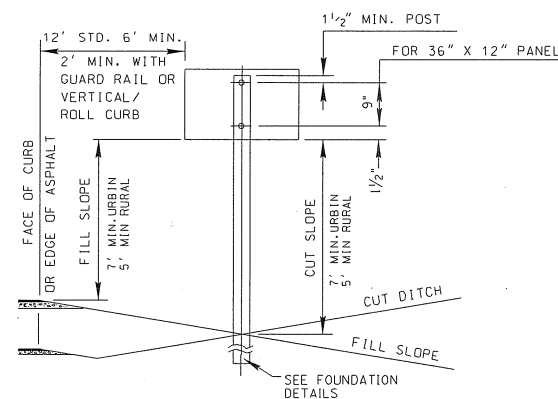


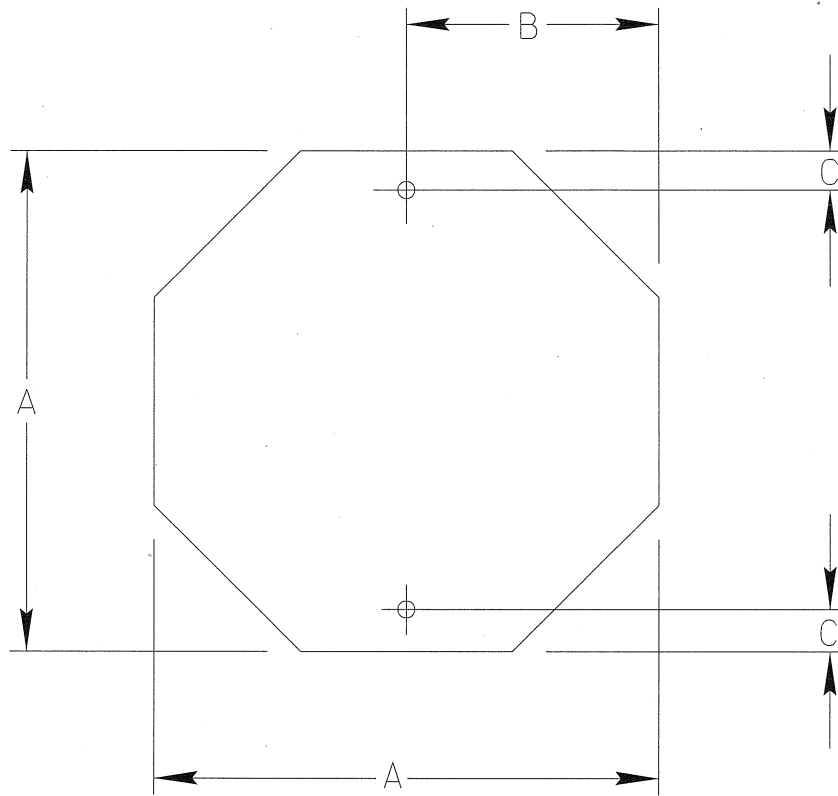
DETAIL NO. 203B	TOWN OF GILBERT STANDARD DETAIL	SCHOOL CROSSWALKS (MULTI LANE - 2 WAY)	REVISED	DETAIL NO. 203B
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NOTES:

1. SEE FHWA STANDARD HIGHWAY SIGNS BOOKLET FOR PANEL BOLT HOLE. SPACING NOT SHOWN.
2. ALL DIMENSIONS IN INCHES EXCEPT AS NOTED.
3. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 3" X 5/16" BOLT WITH FLAT WASHER UNDER NUT AND FLAT WASHER UNDER HEAD, TO ATTACH SIGN TO BRACKET.





A	B	C	THICKNESS
30	15	3	.080
36	18	3	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

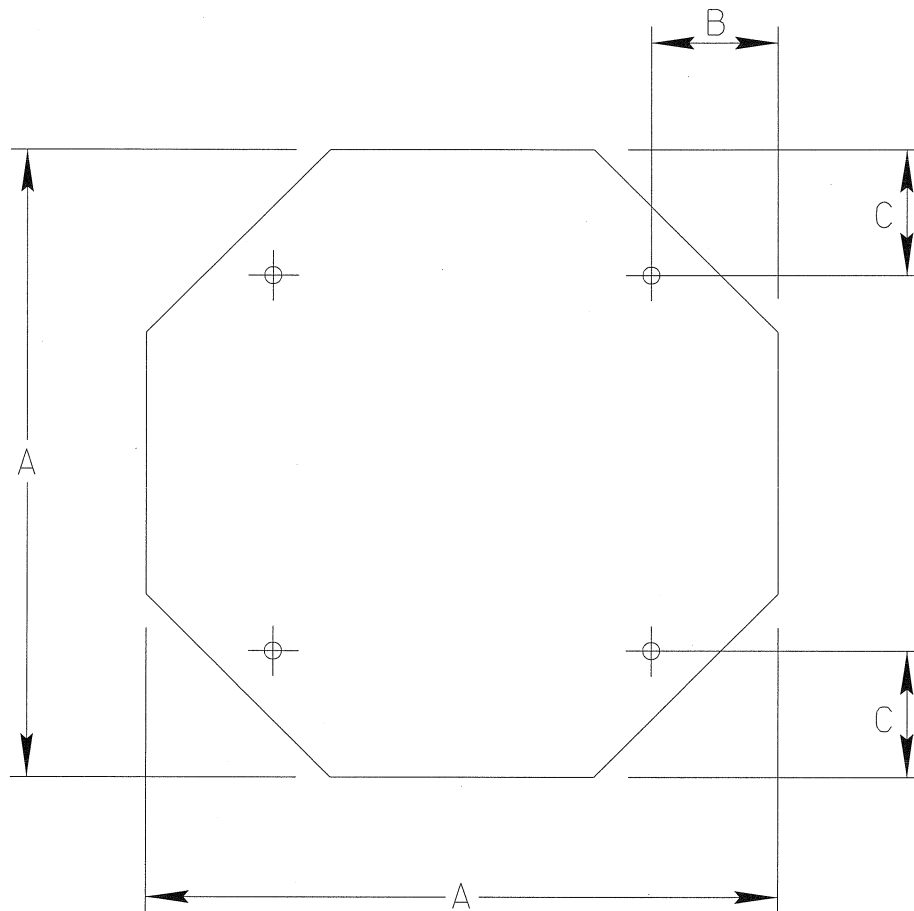
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

OCTAGON

DATE:
05/2004

DETAIL NO.
2061-1



A	B	C	THICKNESS
48	9	9	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

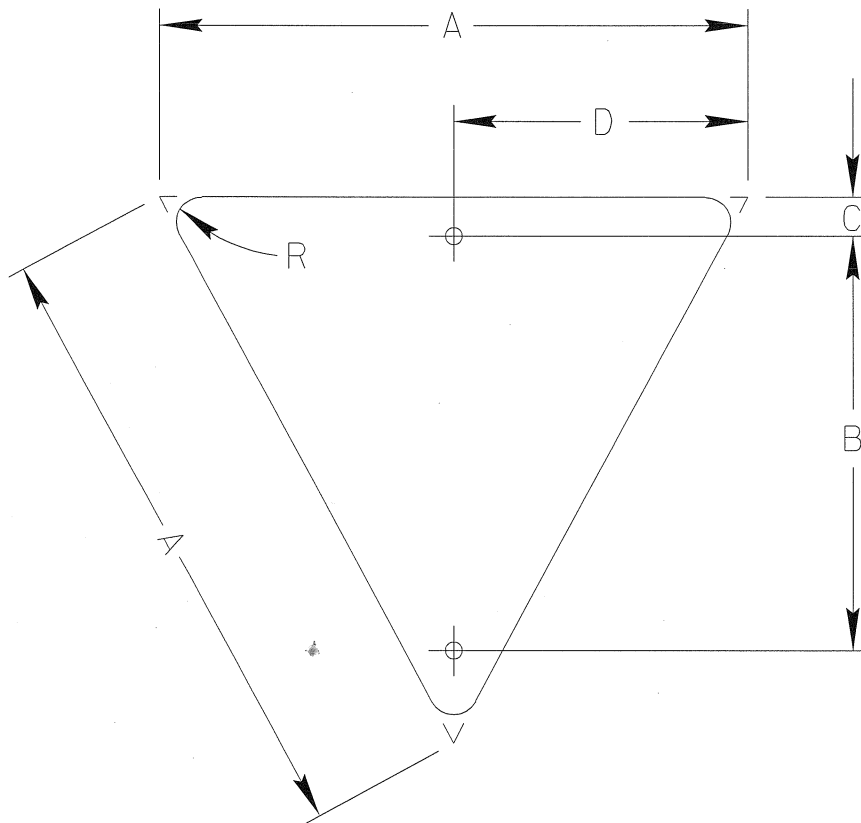
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

OCTAGON

DATE:
05/2004

DETAIL NO.
2061-1A



A	B	C	D	R	THICKNESS
36	21	3	18	1	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

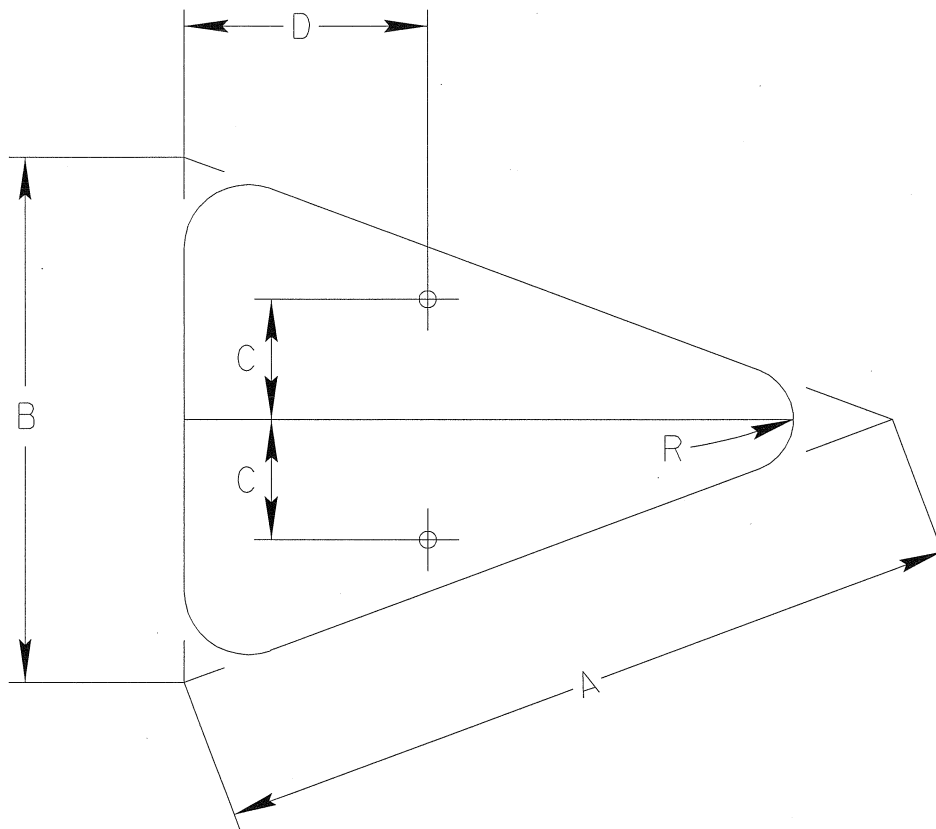
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**EQUILATERAL
TRIANGLE**

DATE:
05/2004

DETAIL NO.
2061-2



A	B	C	D	R	THICKNESS
48	36	9	15	2 1/4	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

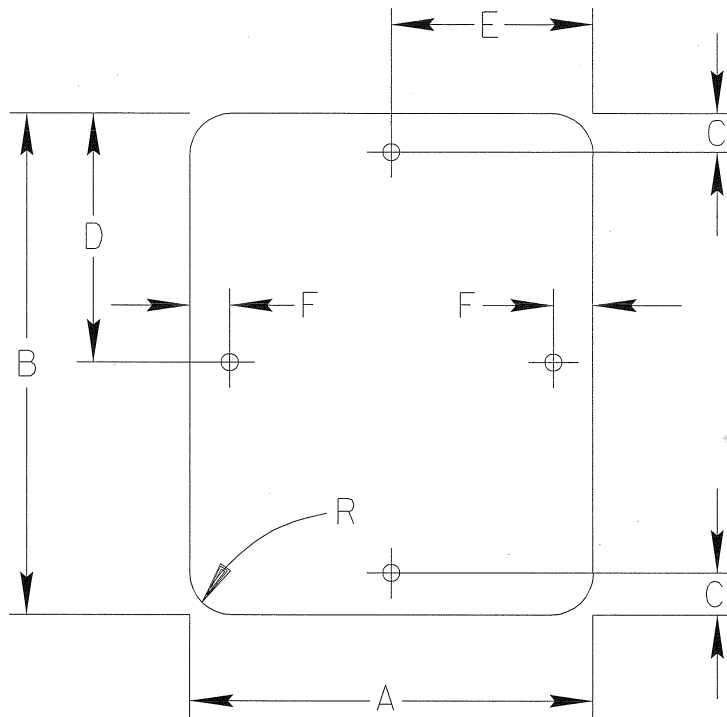
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**ISOSCELES
TRIANGLE**

DATE:
05/2004

DETAIL NO.
2061-3



A	B	C	D	E	F	R	THICKNESS
6	12	1	6	3	1	1	.080
6	18	1	9	3	1	1	.080
7	48	1	24	1	1	1 1/2	.100
11	48	1	24	1	1	1 1/2	.100
12	48	3	24	6	3	1 1/2	.100
24	30	2	15	12	2	1 1/2	.100
24	36	3	18	12	2	1 1/2	.100
30	36	2	18	15	2	1 1/2	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

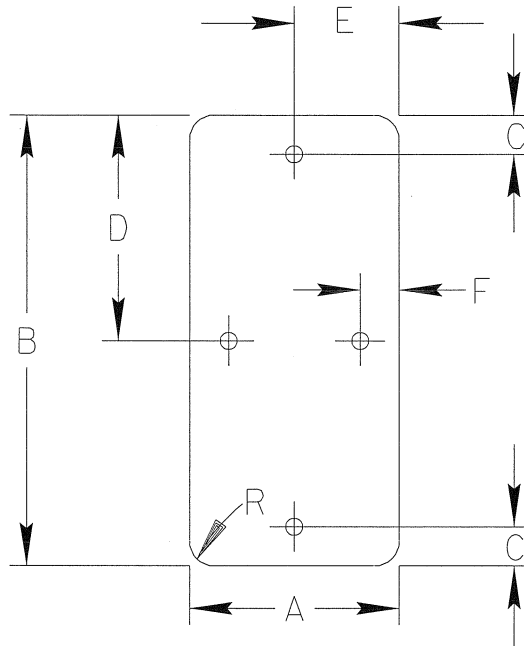
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**VERTICAL
RECTANGLE**

DATE:
05/2004

DETAIL NO.
2061-4



A	B	C	D	E	F	R	THICKNESS
6	24	2	12	3	2	1	.080
6	30	3	15	3	2	1	.100
8	24	2	12	4	2	1 1/2	.100
12	60	3	30	6	3	1 1/2	.100
12	72	6	36	6	3	1 1/2	.100
18	36	3	18	9	3	1 1/2	.100
18	30	3	15	9	3	1 1/2	.100
20	36	3	18	10	3	1 1/2	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

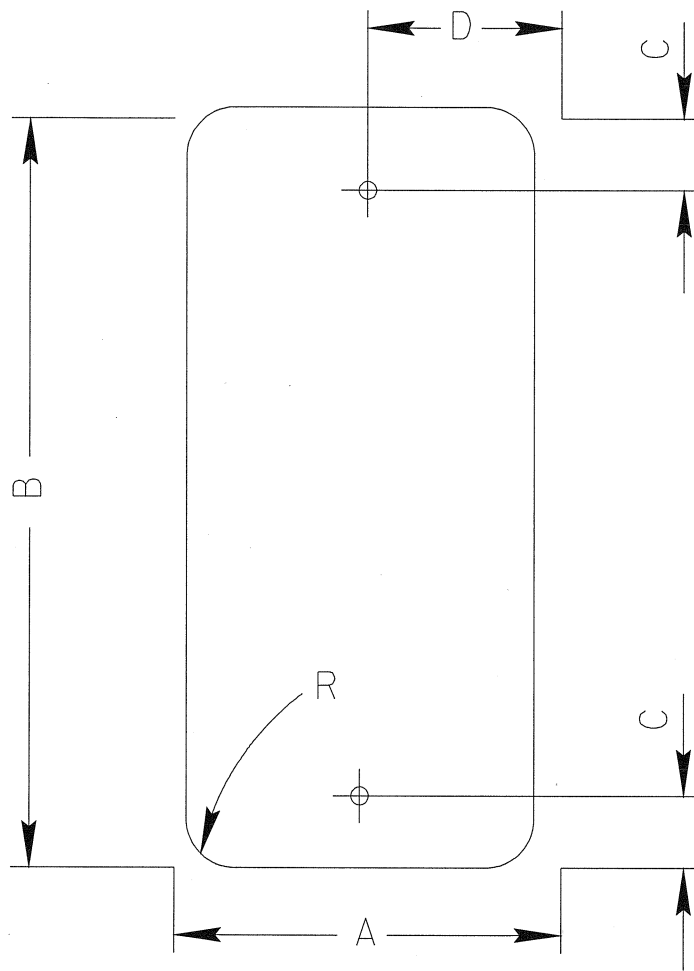
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**VERTICAL
RECTANGLE**

DATE:
05/2004

DETAIL NO.
2061-5



A	B	C	D	R	THICKNESS
18	48	2	9	1 1/2	.125
24	60	6	12	1 1/2	.125
10	18	1	5	1 1/2	.80
10	27	1	5	1 1/2	.80
10	36	1	5	1 1/2	.80

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

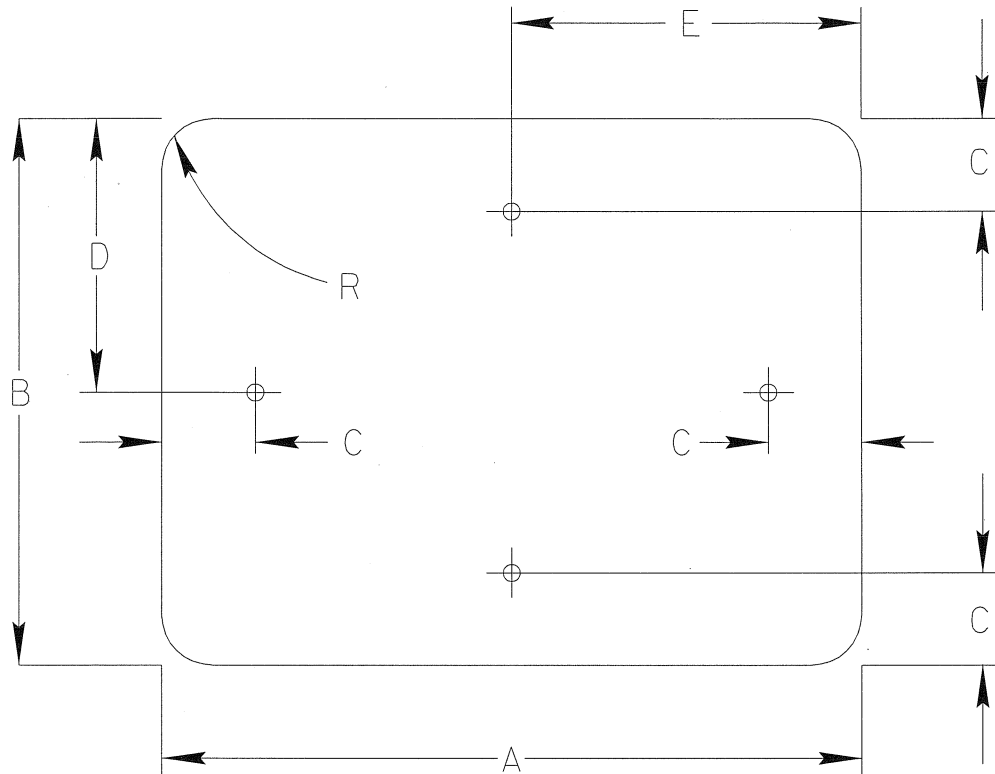
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

RECTANGLE &
MILE POST BLANK

DATE:
10/2004

DETAIL NO.
2061-6



A	B	C	D	E	R	THICKNESS
18	12	1 1/2	6	9	1 1/2	.063
24	18	3	9	12	1 1/2	.100
30	18	2	9	15	1 1/2	.100
36	12	1 1/2	6	18	1 1/2	.100
36	20	2	10	18	1 1/2	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

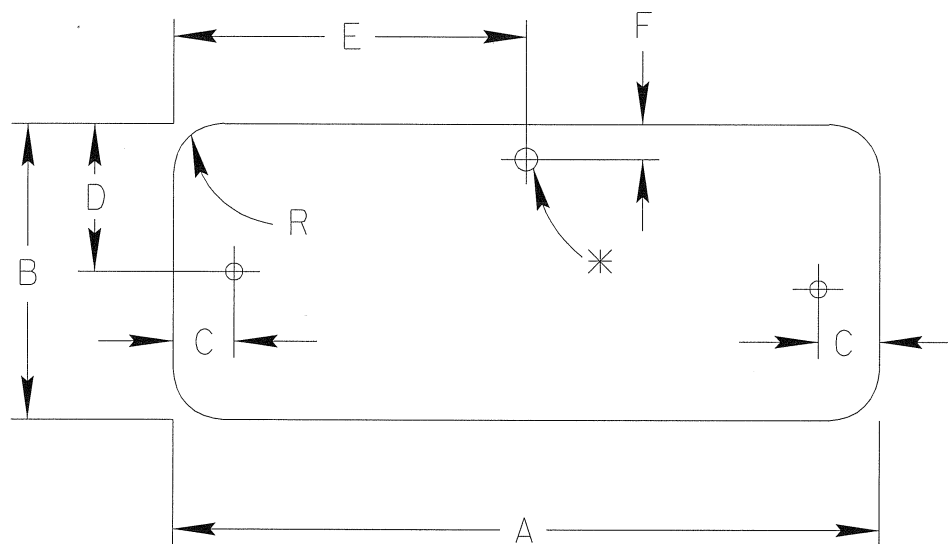
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

RECTANGLE

DATE:
05/2004

DETAIL NO.
2061-7



A	B	C	D	E	F	R	THICKNESS
48	30	9	15	24	3	1 ⁷ / ₈	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

* = Hole diameter is $\frac{9}{16}$ inches

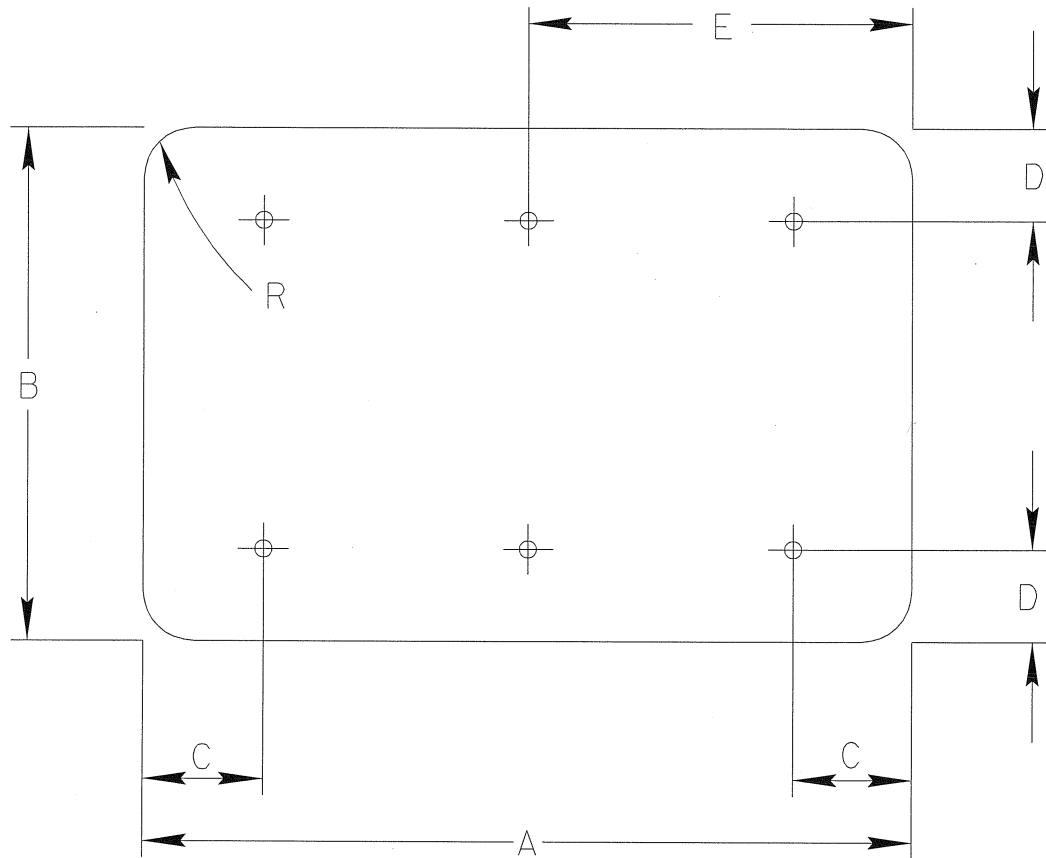
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

RECTANGLE

DATE:
05/2004

DETAIL NO.
2061-8



A	B	C	D	E	R	THICKNESS
48	24	9	3	24	1 ⁷ / ₈	.125
48	36	6	6	24	3	.125
60	30	12	3	30	3	.125
60	36	12	3	30	3	.125
72	48	6	3	36	3	.125
96	48	6	6	48	3	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

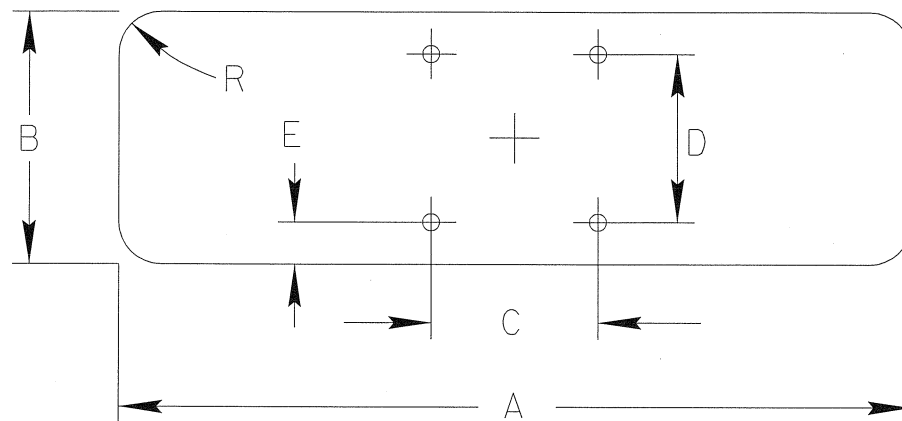
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

RECTANGLE

DATE:
05/2004

DETAIL NO.
2061-9



A	B	C	D	E	R	THICKNESS
24	7	4.6875	5.875	.5625	1 1/2	.125
30	7	4.6875	5.875	.5625	1 1/2	.125
36	7	4.6875	5.875	.5625	1 1/2	.125
42	7	4.6875	5.875	.5625	1 1/2	.125
48	7	4.6875	7.875	.5625	1 1/2	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

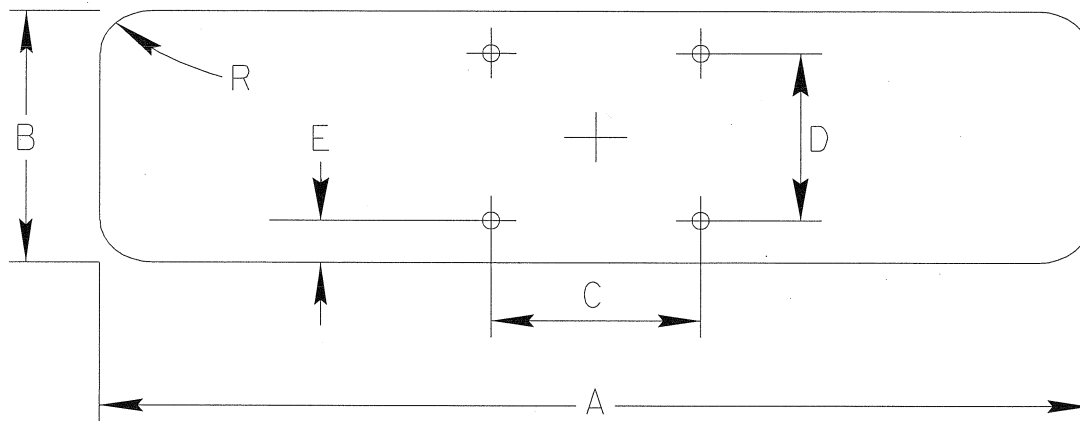
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

STREET NAME
SIGN

DATE:
05/2004

DETAIL NO.
2061-10A



A	B	C	D	E	R	THICKNESS
24	11	6	9.875	0.5625	1 1/2	.125
30	11	6	9.875	0.5625	1 1/2	.125
36	11	6	9.875	0.5625	1 1/2	.125
42	11	6	9.875	0.5625	1 1/2	.125
48	11	6	9.875	0.5625	1 1/2	.125
54	11	6	9.875	0.5625	1 1/2	.125
60	11	6	9.875	0.5625	1 1/2	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

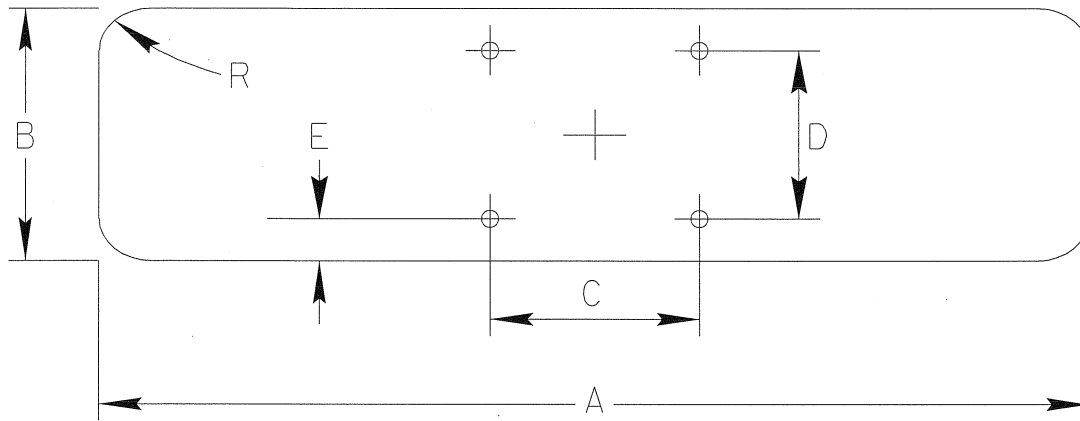
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

STREET NAME
SIGN

DATE:
05/2004

DETAIL NO.
2061-10B



A	B	C	D	E	R	THICKNESS
24	11	4.6875	9.875	.5625	1 1/2	.125
30	11	4.6875	9.875	.5625	1 1/2	.125
36	11	4.6875	9.875	.5625	1 1/2	.125
42	11	4.6875	9.875	.5625	1 1/2	.125
48	11	4.6875	9.875	.5625	1 1/2	.125
54	11	4.6875	9.875	.5625	1 1/2	.125
60	11	4.6875	9.875	.5625	1 1/2	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

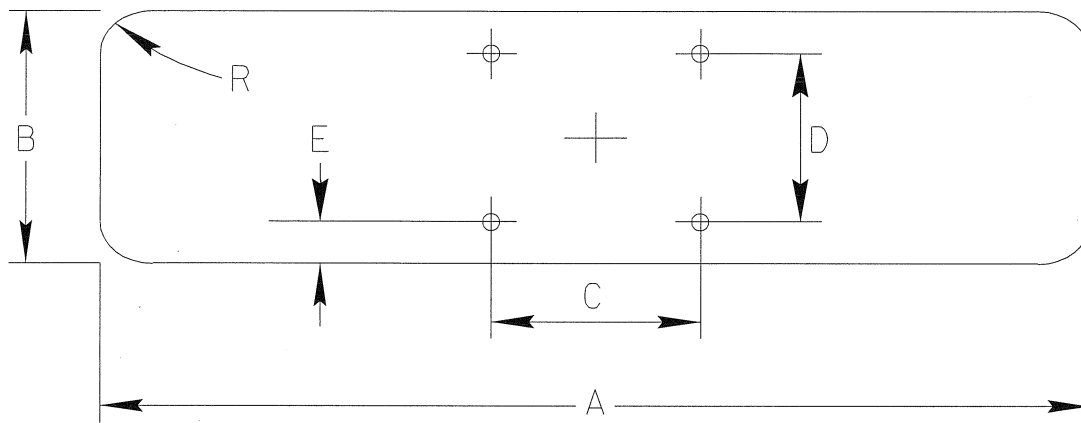
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

STREET NAME
SIGN

DATE:
05/2004

DETAIL NO.
2061-10C



A	B	C	D	E	R	THICKNESS
36	9	4.6875	9.875	.5625	1 1/2	.100
24	11	6	9.875	.5625	1 1/2	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

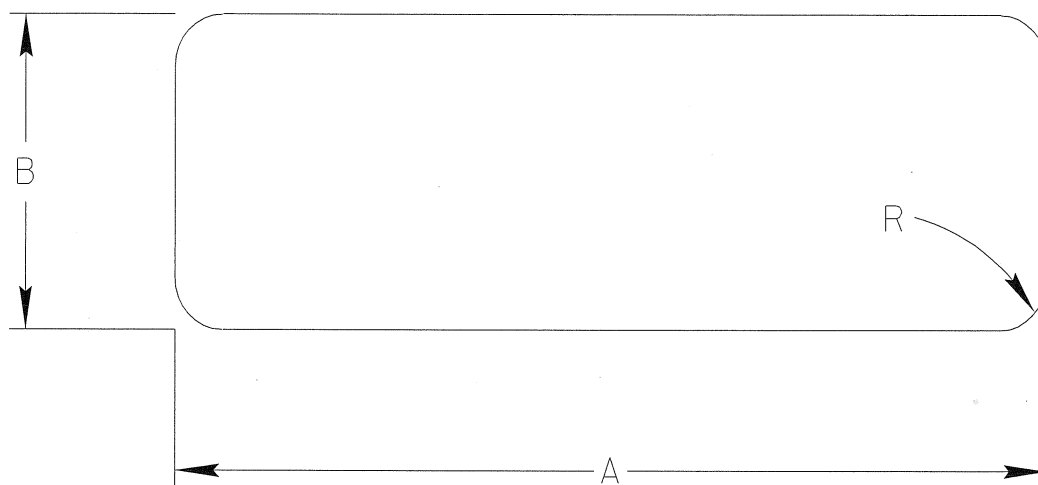
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**DEAD END
NO OUTLET**

DATE:
05/2004

DETAIL NO.
2061-11



A	B	R	THICKNESS
60	18	1 1/2	.125
72	18	1 1/2	.125
84	18	1 1/2	.125
96	18	1 1/2	.125
108	18	1 1/2	.125

(All dimensions are in inches)

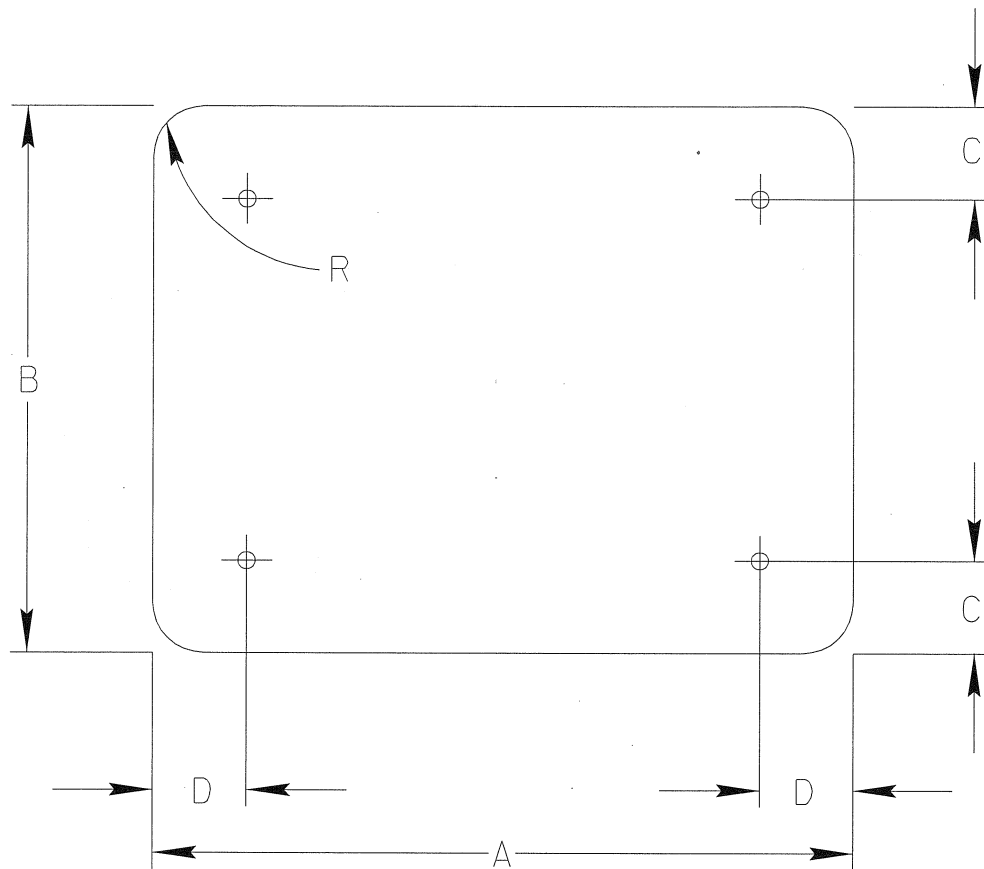
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

OVERHEAD STREET
NAME SIGN

DATE:
05/2004

DETAIL NO.
2061-12



A	B	C	D	R	THICKNESS
60	48	9	6	3	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

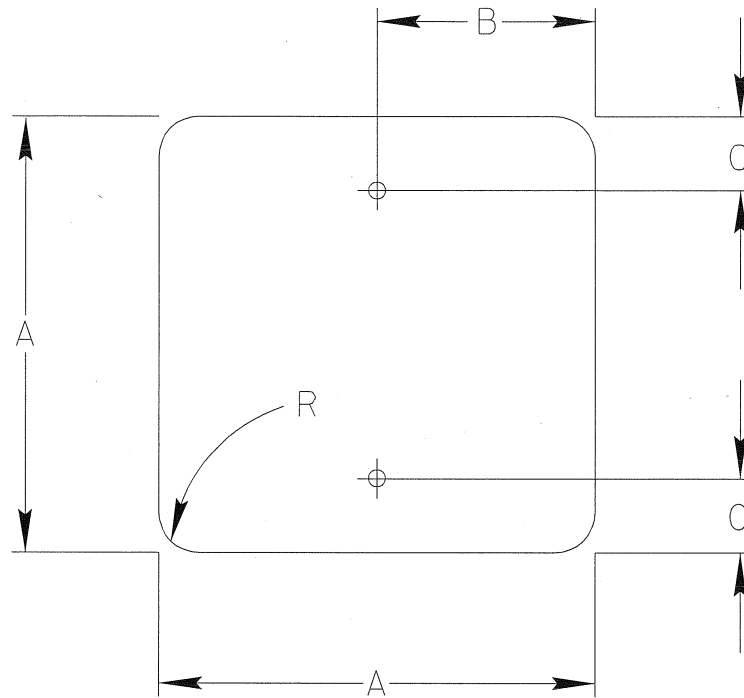
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

RECTANGLE

DATE:
05/2004

DETAIL NO.
2061-13



A	B	C	R	THICKNESS
6	3	1	1	.080

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

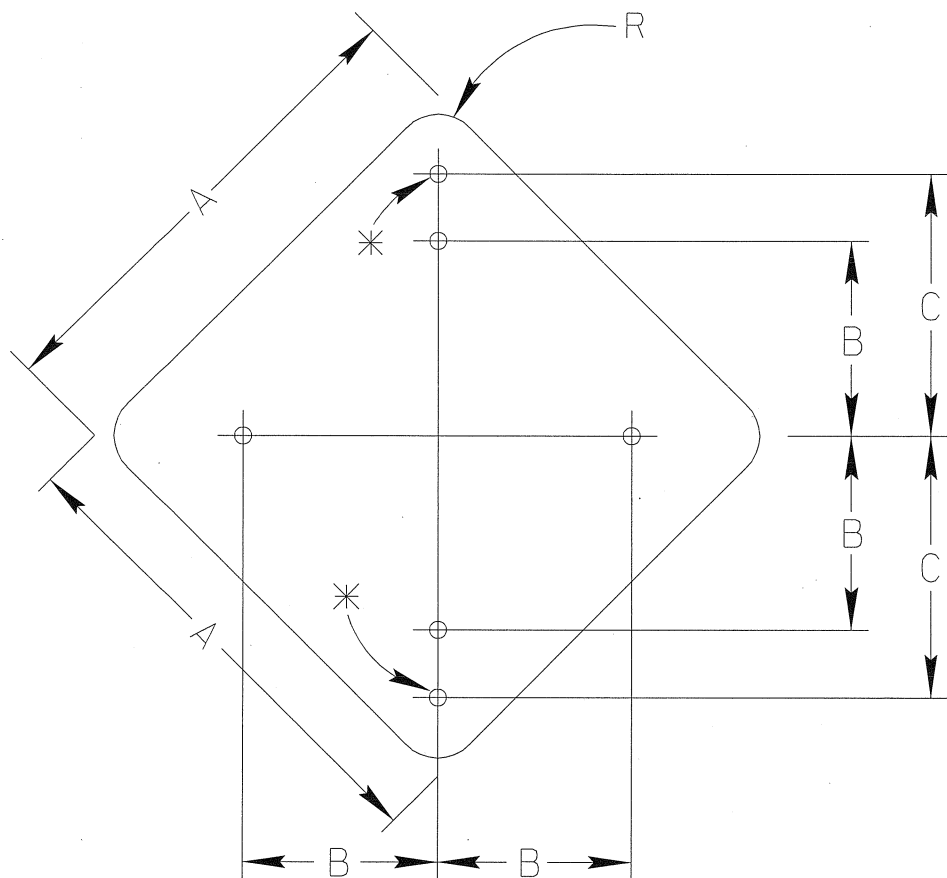
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

SQUARE

DATE:
05/2004

DETAIL NO.
2061-14



A	B	C	R	THICKNESS
48	24	28	3	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

* = Hole diameter is $\frac{9}{16}$ inches

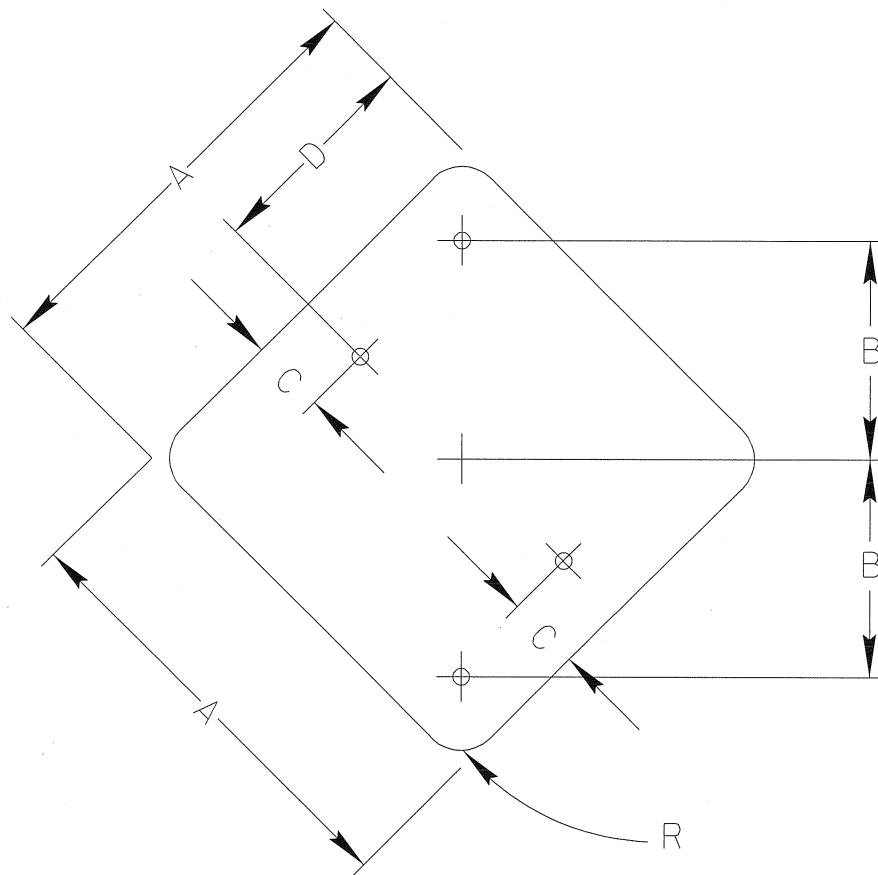
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

DIAMOND

DATE:
05/2004

DETAIL NO.
2061-15



A	B	C	D	R	THICKNESS
18	9	3	9	1 1/2	.080

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

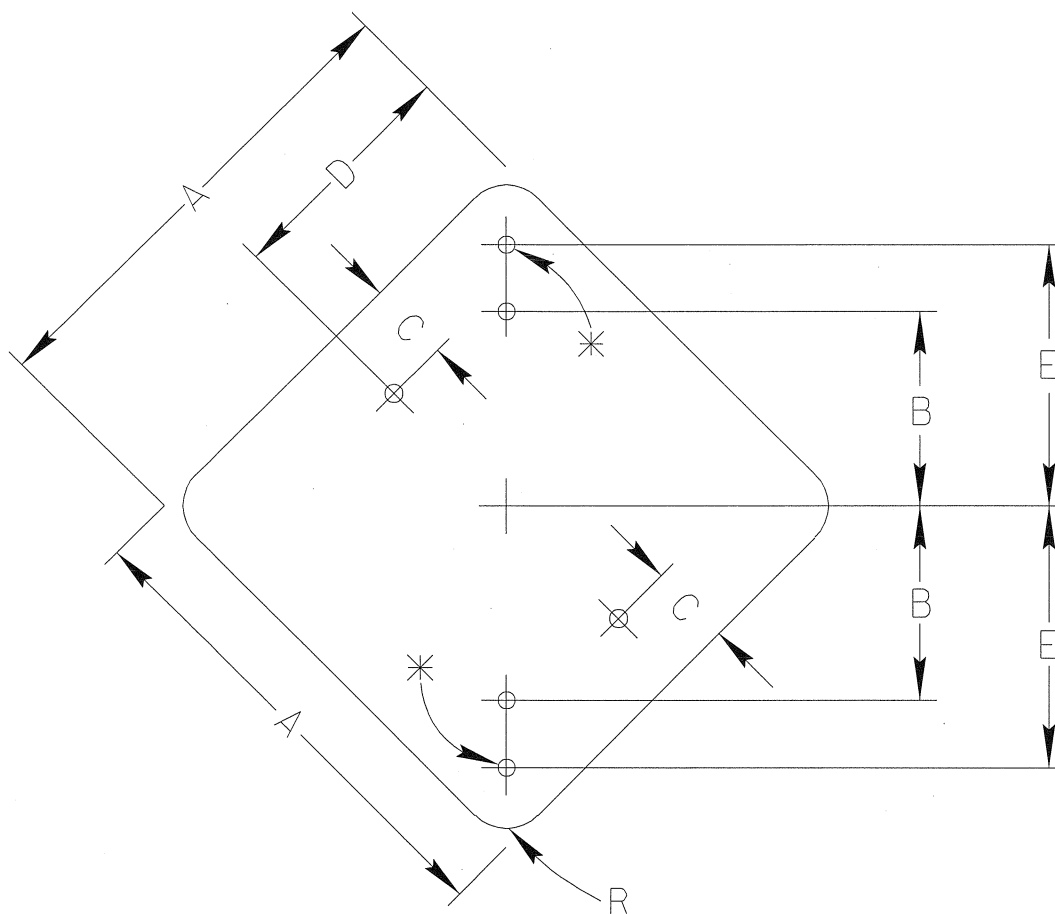
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

MULTIPURPOSE

DATE:
05/2004

DETAIL NO.
2061-16



A	B	C	D	E	R	THICKNESS
24	10	2	12	13	1 1/2	.080
30	15	2	15	18	1 1/2	.080
36	18	2	18	22	1 1/2	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

* = Hole diameter is $\frac{9}{16}$ inches

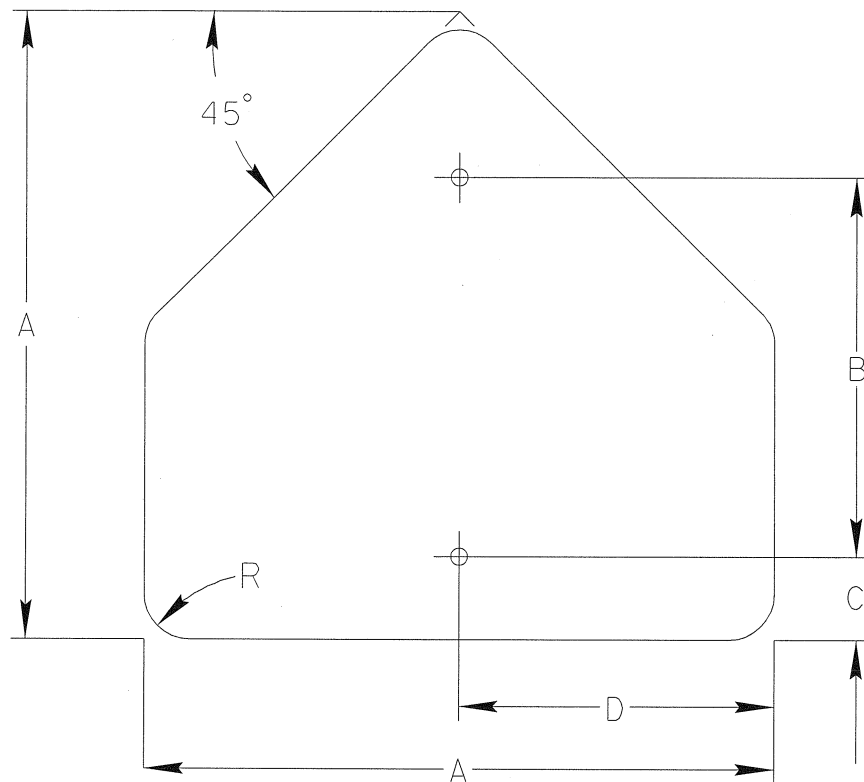
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

MULTIPURPOSE

DATE:
05/2004

DETAIL NO.
2061-17



A	B	C	D	R	THICKNESS
36	24	3	18	2 1/4	.100

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

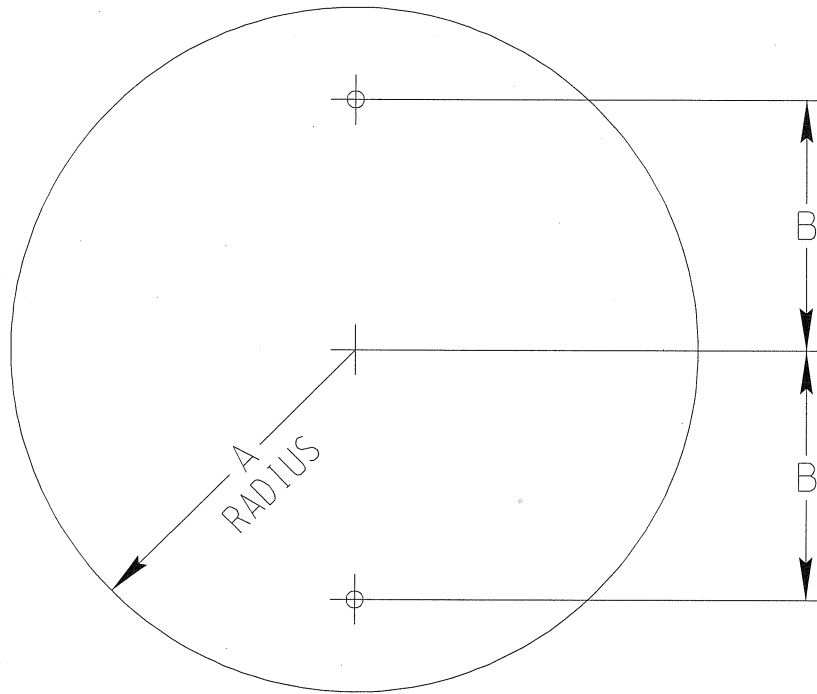
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

PENTAGON

DATE:
05/2004

DETAIL NO.
2061-18



A	B	THICKNESS
18	15	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

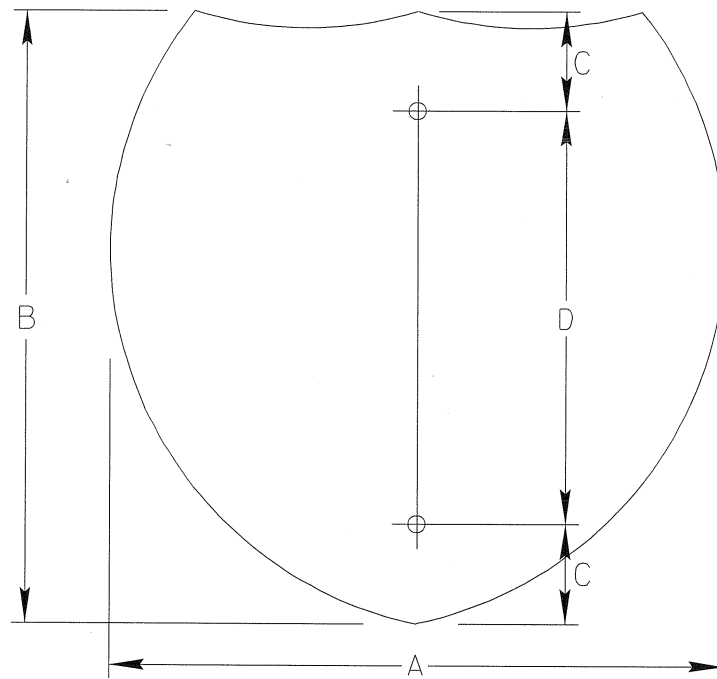
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

CIRCLE

DATE:
05/2004

DETAIL NO.
2061-19



A	B	C	D	THICKNESS
24	24	3	18	.125
30	24	3	18	.125
36	36	6	24	.125
45	36	6	24	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

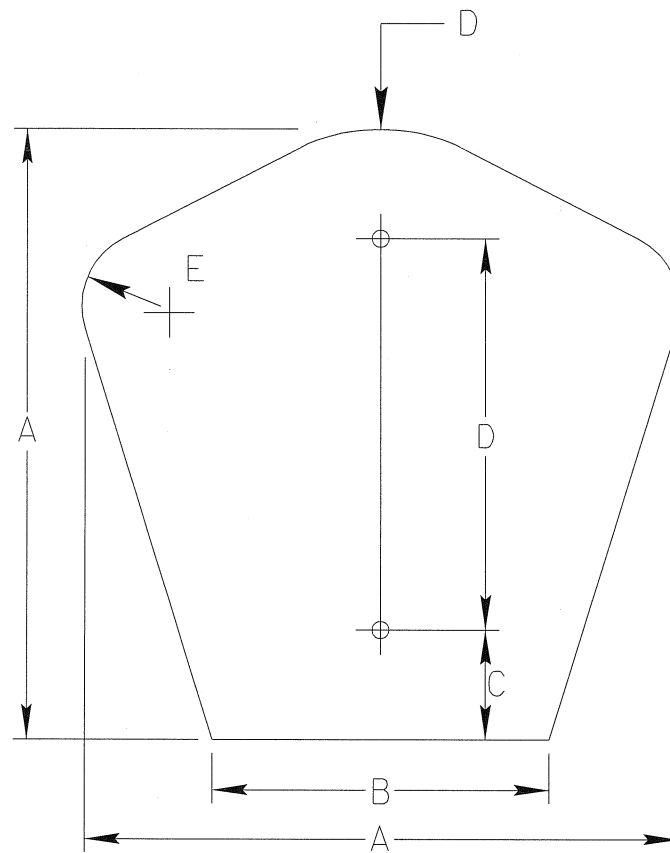
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**INTERSTATE
SHIELD**

DATE:
05/2004

DETAIL NO.
2061-20



A	B	C	D	E	THICKNESS
18	15	1	5	2	.125
24	18	2	5.313	2	.125
30	24	2	6.625	2	.125

(All dimensions are in inches)

Hole diameter is $\frac{3}{8}$ inches unless otherwise noted

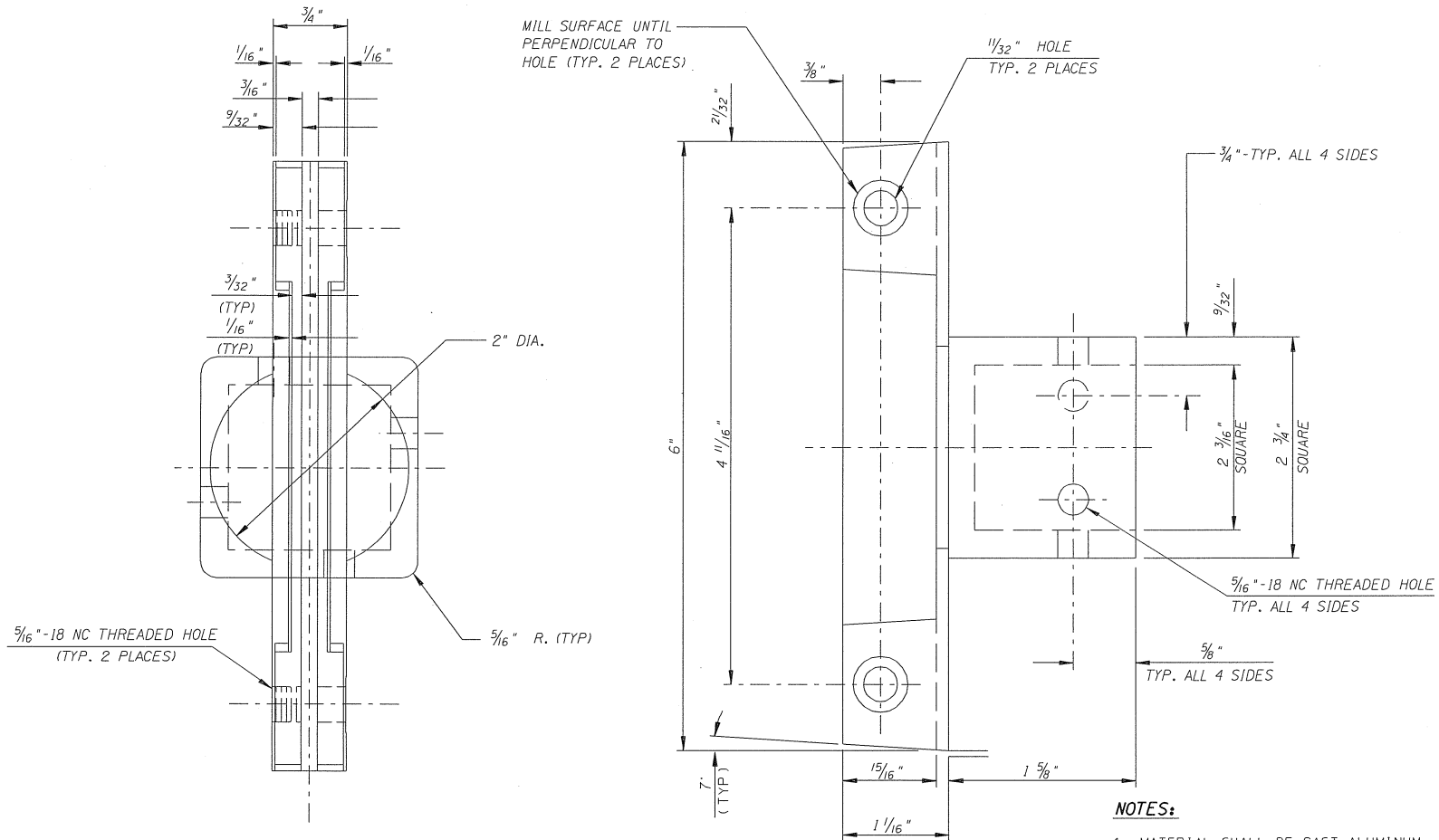
(Not to Scale)

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**COUNTY
SHIELD**

DATE:
05/2004

DETAIL NO.
2061-21



NOTES:

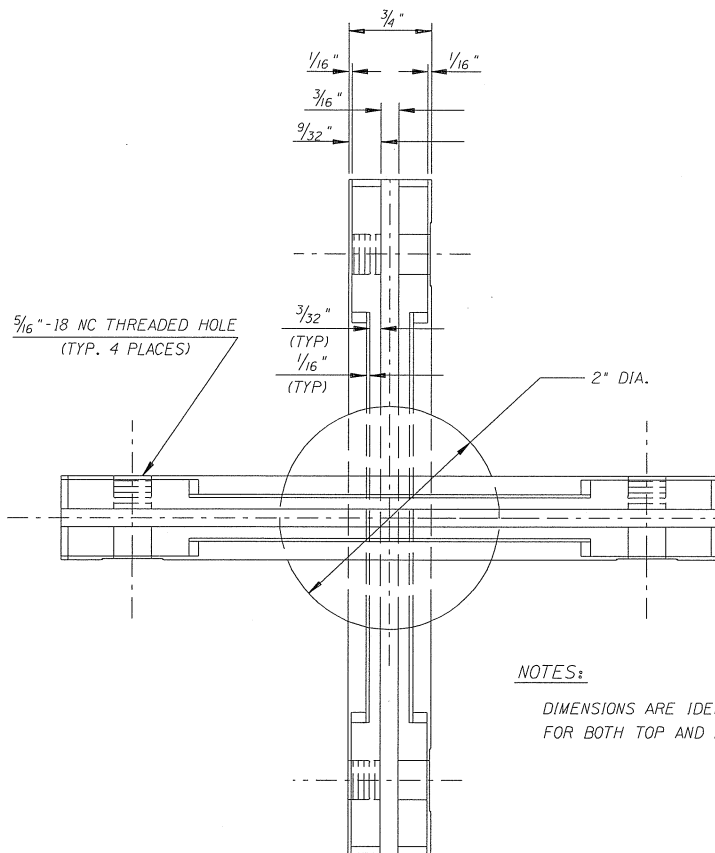
1. MATERIAL SHALL BE CAST ALUMINUM.
2. POST CAP MAY BE SUPPLIED WITH TWO (2) 'VANDAL PROOF' 5/16" X 3/4"-18 NC MACHINE SCREWS AND TWO (2) 'VANDAL PROOF' 5/16" X 3/16"-18 SET SCREWS.
3. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 1 1/2" X 5/16" BOLT TO ATTACH POST CAP TO THE POST.
4. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 1" X 5/16" BOLT TO ATTACH SIGN TO BRACKET.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

(6") STREET SIGN POST CAP
(FOR 2" SQUARE TUBING)

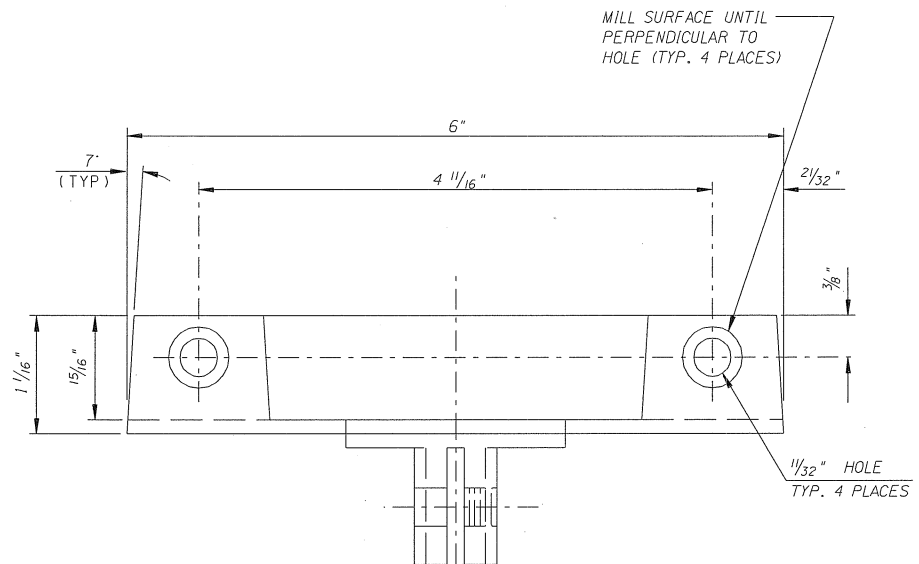
DATE:
05/2004

DETAIL NO.
2062-1



NOTES:

DIMENSIONS ARE IDENTICAL
FOR BOTH TOP AND BOTTOM.



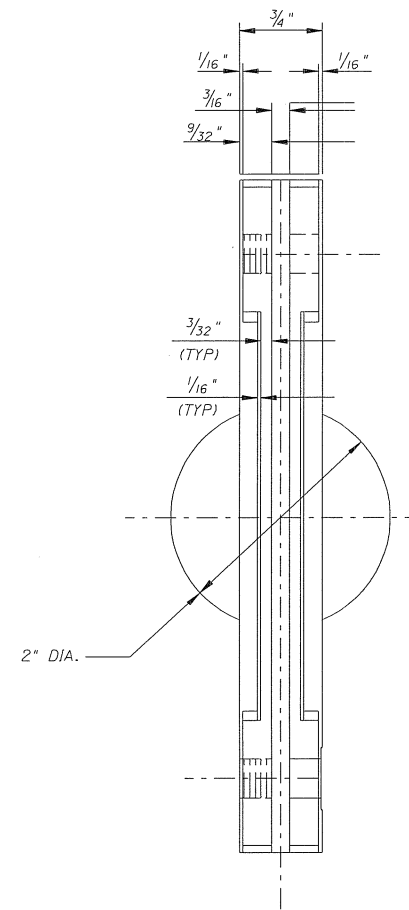
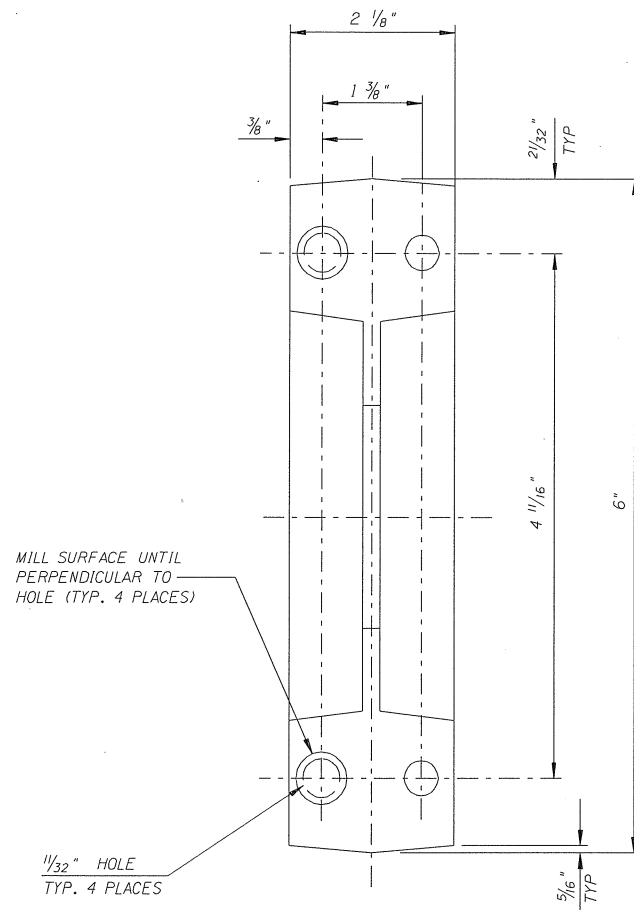
NOTES:

1. MATERIAL SHALL BE CAST ALUMINUM.
2. SEPERATOR SHALL BE SUPPLIED WITH FOUR (4) VANDAL PROOF 5/16" X 3/4"-18 NC MACHINE SCREWS
3. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 1" X 5/16" BOLT TO ATTACH SIGN TO BRACKET.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**(6") STREET SIGN
SEPARATOR BRACKET**

DATE: 05/2004
DETAIL NO. 2062-2



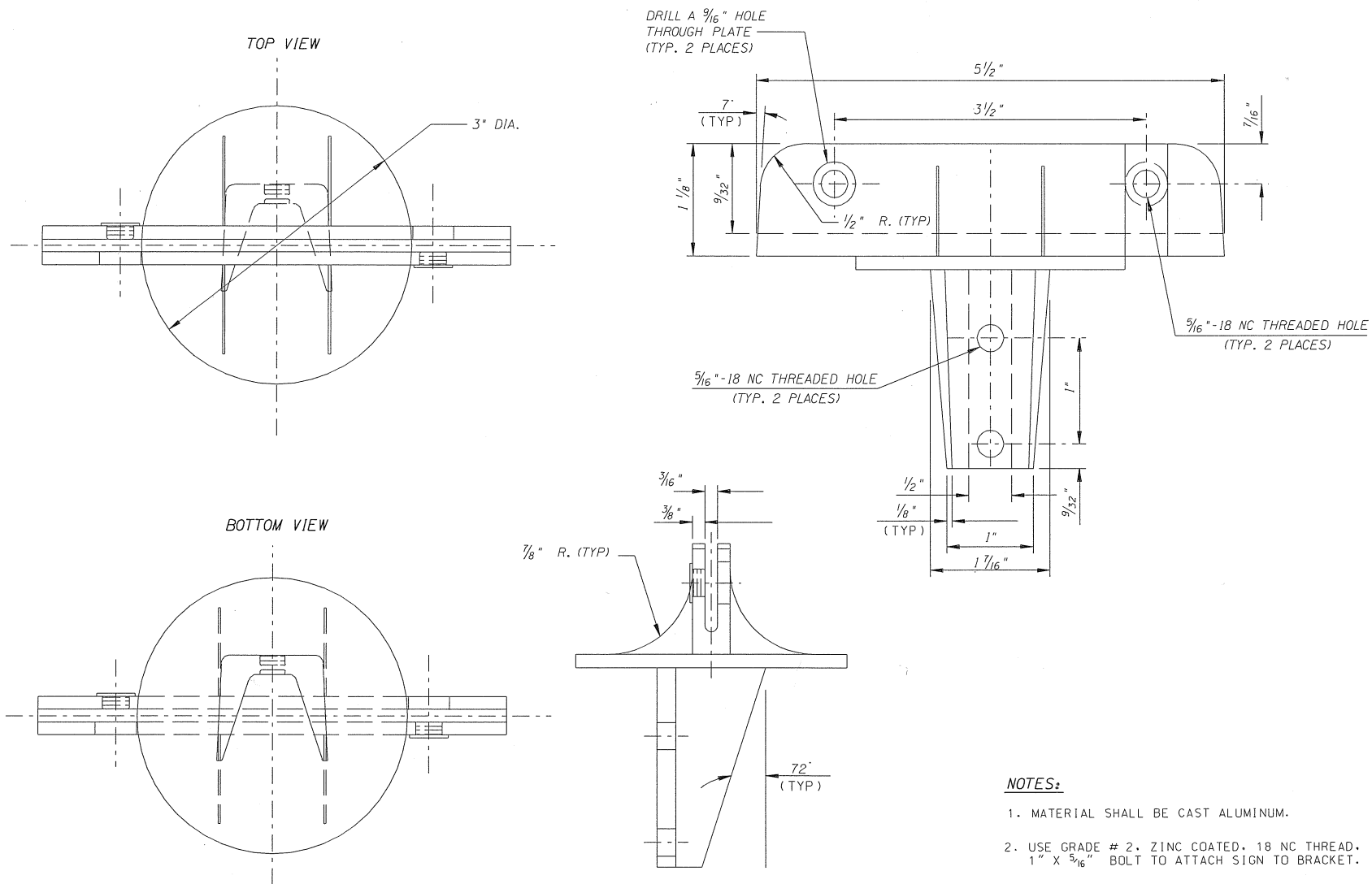
NOTES:

1. MATERIAL SHALL BE CAST ALUMINUM.
2. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 1" X $\frac{5}{16}$ " BOLT TO ATTACH SIGN TO BRACKET.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**DEAD END / NO OUTLET
SEPARATOR BRACKET**

DATE: 05/2004
DETAIL NO. 2062-3

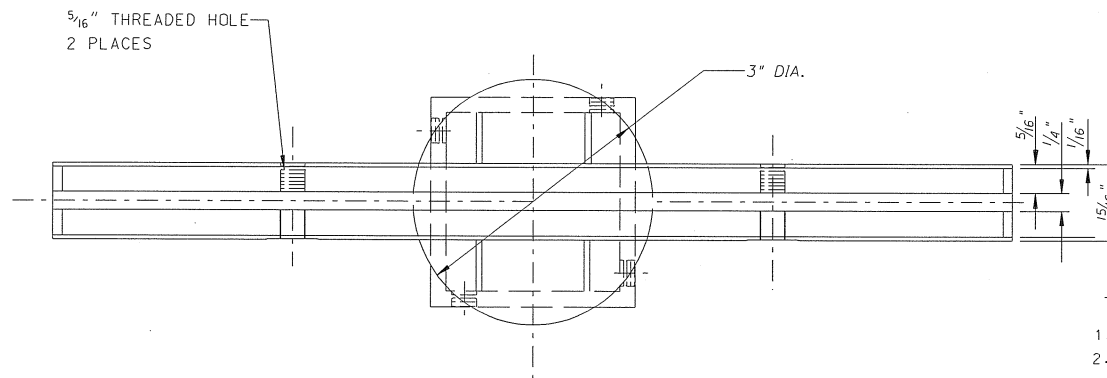
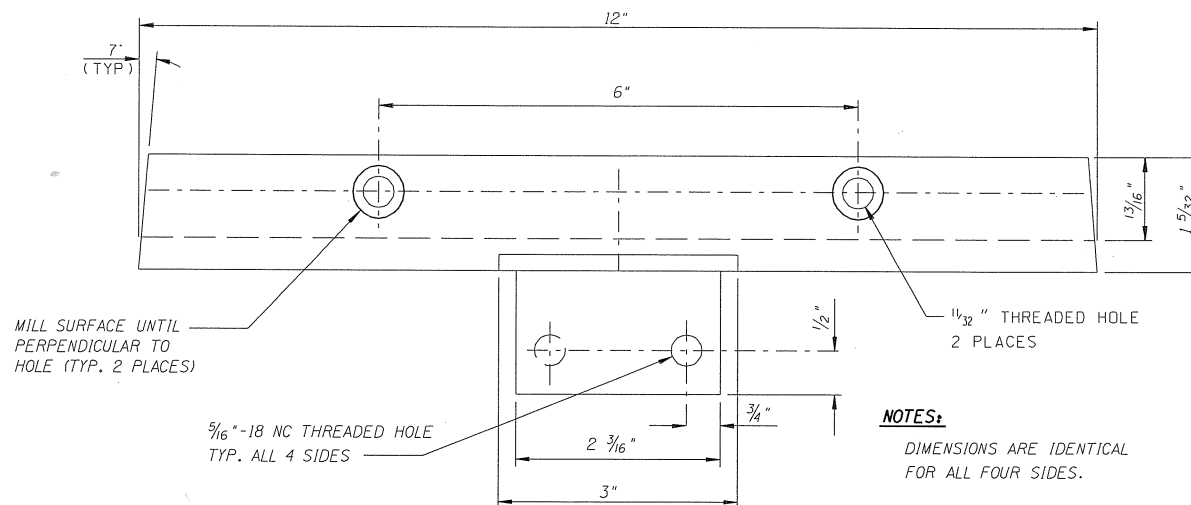


MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

STREET SIGN POST CAP

(FOR " U " CHANNEL POST)

DATE:	DETAIL NO.
05/2004	2062-4



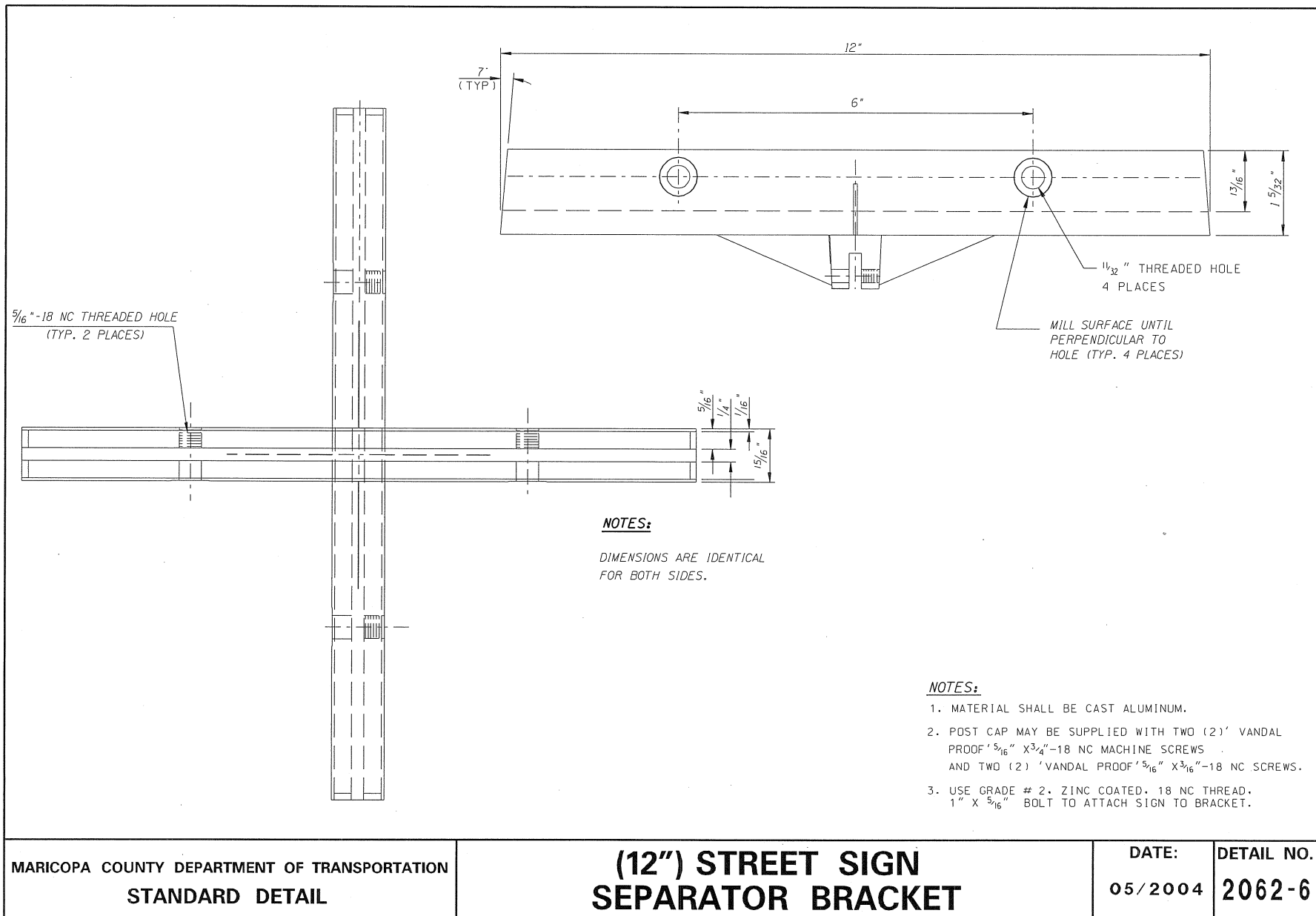
NOTES:

1. MATERIAL SHALL BE CAST ALUMINUM.
2. POST CAP MAY BE SUPPLIED WITH TWO (2) 'VANDAL PROOF' 5/16" X 3/4"-18 NC MACHINE SCREWS AND TWO (2) 'VANDAL PROOF' 5/16" X 3/16"-18 SET SCREWS.
3. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 1 1/2" X 5/16" BOLT TO ATTACH POST CAP TO THE POST.
4. USE GRADE # 2, ZINC COATED, 18 NC THREAD, 1" X 5/16" BOLT TO ATTACH SIGN TO BRACKET.

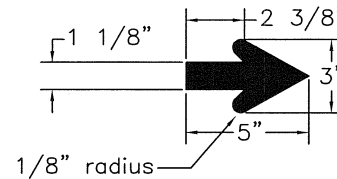
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

(12'') STREET SIGN POST CAP

DATE:	DETAIL NO.
05/2004	2062-5



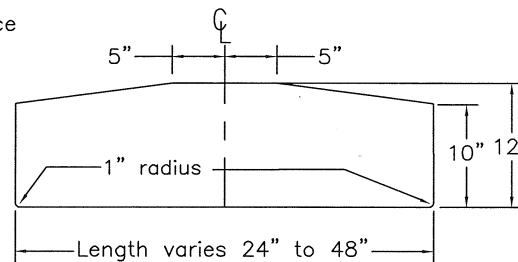
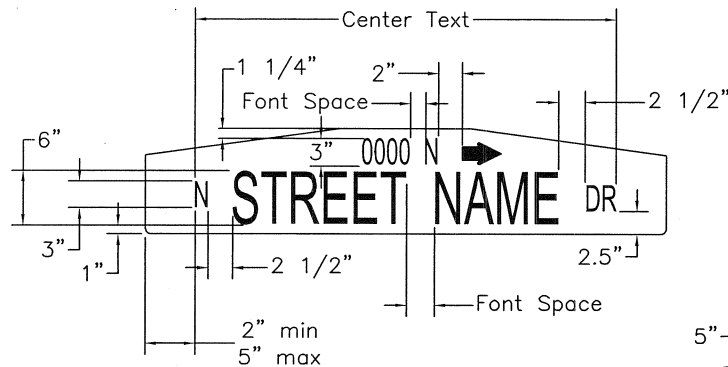
10" PUBLIC STREET NAME SIGN



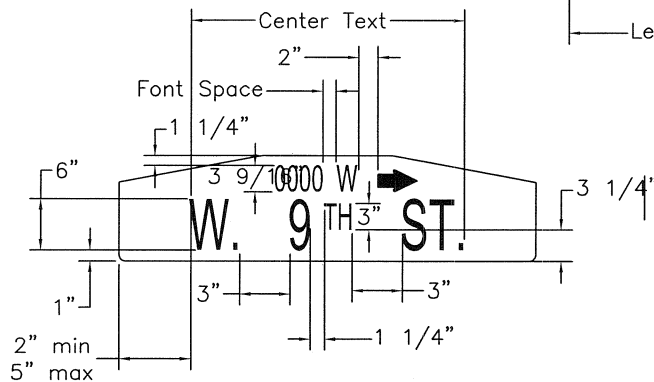
DETAIL NO.
M-20.1

- REV. 01/01/05

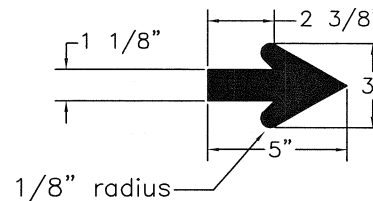
12" Public Street Name Sign



DETAIL "A" - BLANK DIMENSIONS



NUMERICAL STREET NAME



NOTES:

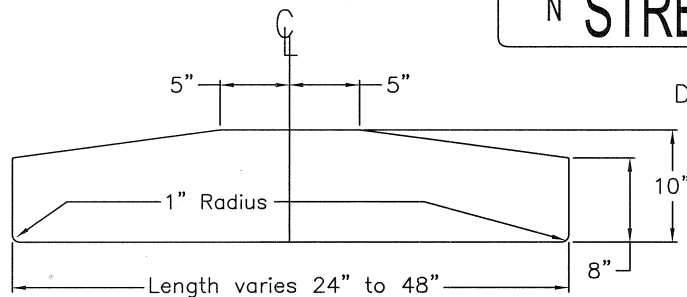
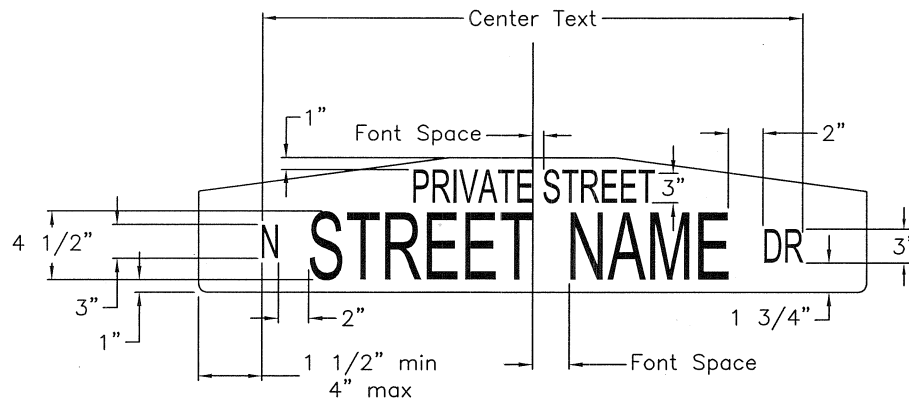
1. All reflective sheeting material(s) shall be pressure sensitive ASTM type IV white wide angle prismatic sheeting.
2. All transparent acrylic, pressure-sensitive film shall be 3M #1177 Green Electro Cut Film, or approved equal.
3. Street name spellings and types can be obtained from the "Street Area Directory" available at the office of the City Clerk at 20 E. Main St. Suite 600.
4. Letter font shall be uppercase Highway Gothic "C". Minimal kerning is acceptable when signs reach the maximum of 48" in length. ("B" font may be used if approved by the City of Mesa Sign Shop. Contact the City of Mesa Sign Shop at 480-644-3175 for assistance and approval of sign layout.
5. See detail "A" for 12" street sign for blank dimensions.
6. Only street names that are numbered shall have periods following the prefix and suffix when abbreviated.
7. These signs are constructed by applying a Type IV sheeting to the entire blank. On top of this sheeting a green translucent pressure-sensitive film from which the legend has been cut and removed is applied. Thus the green background is applied on top of the white Type IV sheeting resulting in a sign with a white Type IV legend and a green background.
8. Sign blanks shall be 5052-H38 alloy treated aluminum with Alodine 1200 conversion coating.
9. Sign Blanks shall be 0.125 thick with rounded corners as noted.

NOT TO SCALE

12" PUBLIC STREET NAME SIGN

DETAIL NO.
M-20.2

10" Private Street Name Sign



DETAIL "A" - BLANK DIMENSIONS

DETAIL "B"

NOT TO SCALE

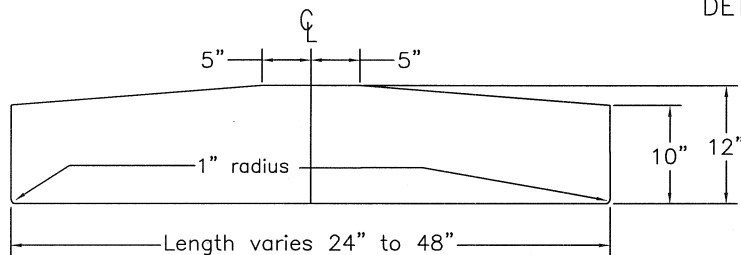
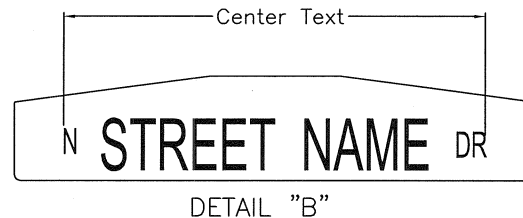
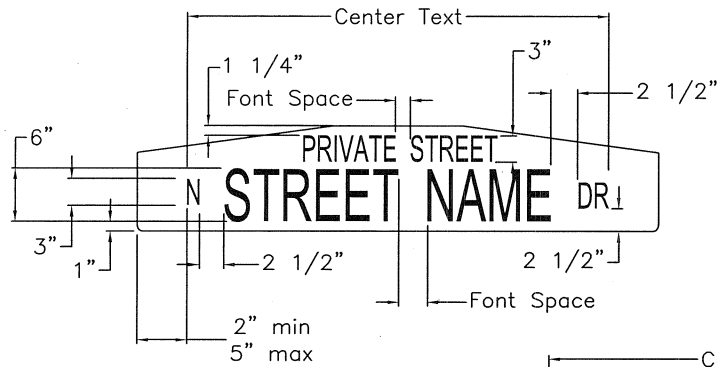
NOTES:

1. All reflective sheeting material(s) shall be pressure sensitive ASTM type IV white wide angle prismatic sheeting.
2. All transparent acrylic, pressure-sensitive film shall be 3M #1175 Blue Electro Cut Film, or approved equal.
3. Street name spellings and types can be obtained from the "Street Area Directory" available at the office of the City Clerk at 20 E. Main St. Suite 600.
4. Letter font for the Street Name text shall be uppercase Highway Gothic "C". Minimal kerning is acceptable when signs reach the maximum of 48" in length. "B" font may be used if approved by the City of Mesa Sign Shop. Letter font for "PRIVATE STREET" text shall be upper case Highway Gothic "B". Contact the City of Mesa Sign Shop at 480-644-3175 for assistance and approval of sign layout.
5. These signs are constructed by applying a Type IV sheeting to the entire blank. On top of this sheeting a blue translucent pressure-sensitive film, from which the legend has been cut and removed, is applied. Thus the blue background is applied on top of the white Type IV sheeting resulting in a sign with a white Type IV legend and a blue background.
6. See detail "A" for 10" street sign blank dimensions.
7. Only Street Names that are numbered shall have periods following the prefix and suffix when abbreviated.
8. Where a private street intersects a public street, the sign for the public street shall be white on blue, and shall not include the "Private Street" text. See detail "B"
9. Sign blanks shall be 5052-H38 alloy treated aluminum with Alodine 1200 conversion coating.
10. Sign blanks shall be 0.125 thick with rounded corners. See Detail "A"
11. For numbered Private Street Name signs formatting, see Mesa Detail M-20.2.
12. Alternate background colors and/or letter fonts may be approved by the City Traffic Engineer.

10" PRIVATE STREET NAME SIGN

DETAIL NO.
M-21.1

12" Private Street Name Sign



DETAIL "A"— BLANK DIMENSIONS

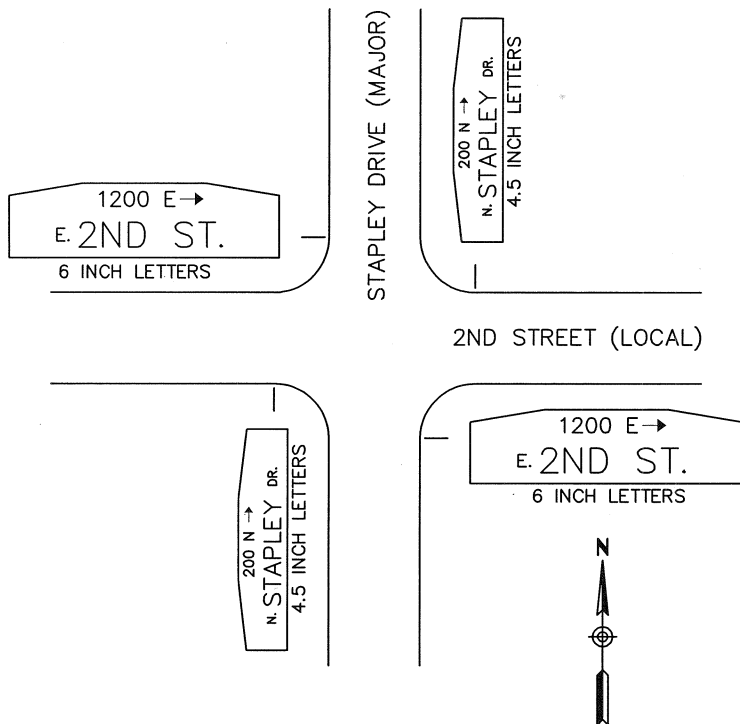
NOT TO SCALE

NOTES:

1. All reflective sheeting material(s) shall be pressure sensitive ASTM type IV white wide angle prismatic sheeting.
2. All transparent acrylic, pressure-sensitive film shall be 3M #1175 Blue Electro Cut Film, or approved equal.
3. Street name spellings and types can be obtained from the "Street Area Directory" available at the office of the City Clerk at 20 E. Main St. Suite 600.
4. Letter font for Street Name text shall be uppercase Highway Gothic "C". Minimal kerning is acceptable when signs reach the maximum of 48" in length. "B" font may be used if approved by the City of Mesa Sign Shop. Letter font for "PRIVATE STREET" text shall be upper case Highway Gothic "B". Contact the City of Mesa Sign Shop at 480-644-3175 for assistance and approval of sign layout.
5. These signs are constructed by applying a Type IV sheeting to the entire blank. On top of this sheeting a blue translucent pressure-sensitive film, from which the legend has been cut and removed, is applied. Thus the blue background is applied on top of the white Type IV sheeting resulting in a sign with a white Type IV legend and a blue background.
6. See detail "A" for 12" street sign blank dimensions.
7. Only Street Names that are numbered shall have periods following the prefix and suffix when abbreviated.
8. Where a private street intersects a public street, the sign for the public street shall be white on blue, and shall not include the "Private Street" text. See detail "B"
9. Sign blanks shall be 5052-H38 alloy treated aluminum with Alodine 1200 conversion coating.
10. Sign blanks shall be 0.125 thick with rounded corners. See Detail "A"
11. For numbered Private Street Name signs formatting, see Mesa Detail M-20.2.
12. Alternate background colors and/or letter fonts may be approved by the City Traffic Engineer.

12" PRIVATE STREET NAME SIGN

DETAIL NO.
M-21.2



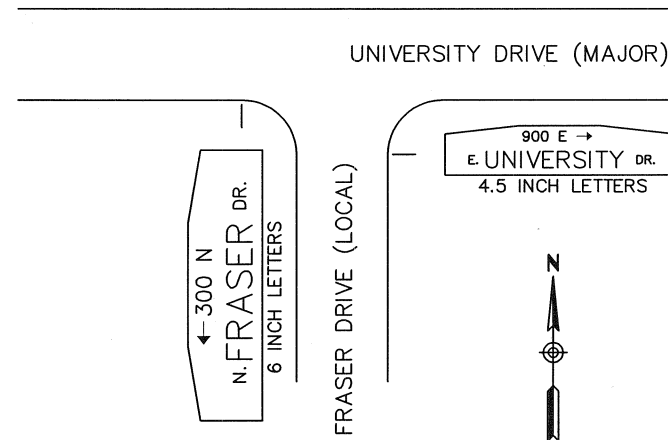
ARTERIAL/COLLECTOR TO LOCAL
4-WAY INTERSECTION

NOTES:

1. 4.5 INCH LETTERS TO BE USED ON STREETS WITH A SPEED LIMIT OF 25 MPH.

6 INCH LETTERS TO BE USED ON STREETS WITH SPEED LIMITS OF 30 MPH OR GREATER

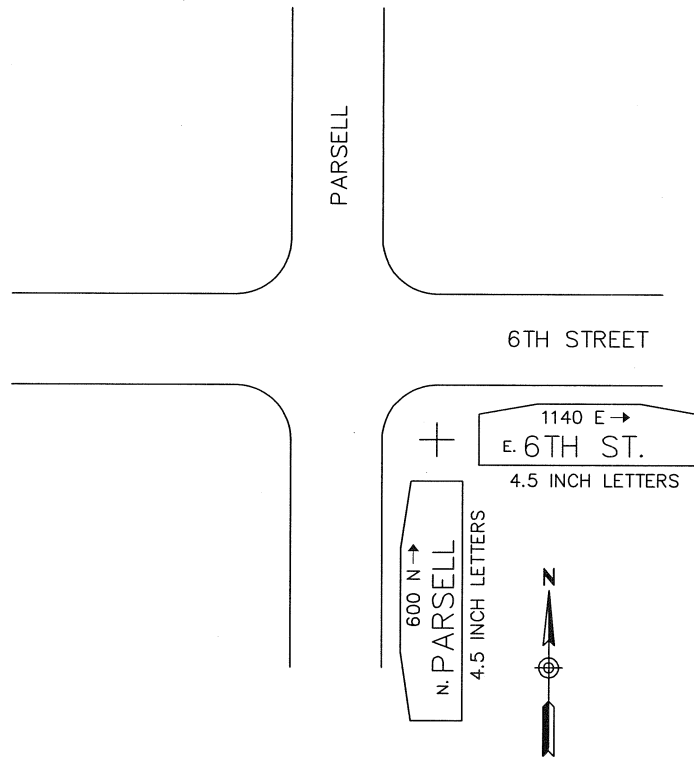
2. SEE DETAILS M-20.1, M-20.2, M-21.1, M-21.2 FOR STREET NAME SIGN DETAILS.



ARTERIAL/COLLECTOR TO LOCAL
"T" INTERSECTION

STREET NAME SIGNS, ARTERIAL/COLLECTOR TO LOCAL

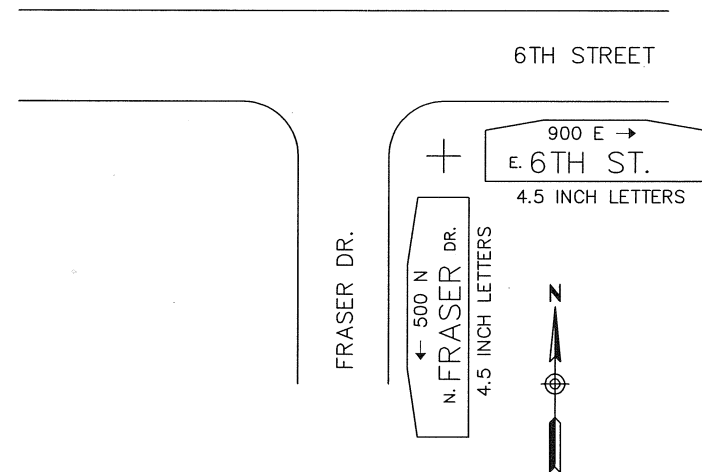
DETAIL NO.
M-21.3



LOCAL TO LOCAL, 4-WAY INTERSECTION

NOTES:

1. 4.5 INCH LETTERS TO BE USED ON STREETS WITH A SPEED LIMIT OF 25 MPH.
- 6 INCH LETTERS TO BE USED ON STREETS WITH SPEED LIMITS OF 30 MPH OR GREATER
2. SEE DETAILS M-20.1, M-20.2, M-21.1, M-21.2 FOR STREET NAME SIGN DETAILS.



LOCAL TO LOCAL, "T" INTERSECTION

STREET NAME SIGNS, LOCAL TO LOCAL

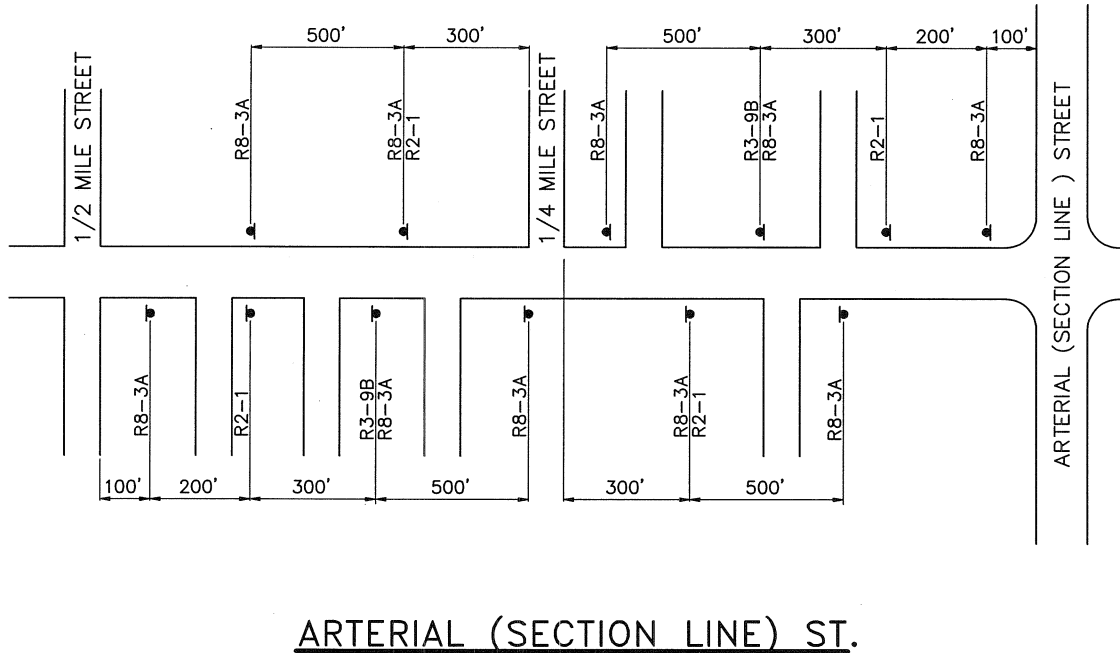
DETAIL NO.
M-21.4

NOTES:

1. USE STREET LIGHT POLES FOR SIGN MOUNTING WHERE POSSIBLE
2. 200' MINIMUM DISTANCE BETWEEN SIGNS PREFERRED.
3. BUS STOP SIGNS TYPICALLY $\pm 100'$ FROM ARTERIAL, 1/4 MILE OR 1/2 MILE STREET INTERSECTION. SEPARATE R8-3A IS NOT NEEDED WHERE NO PARKING SYMBOL IS ON BUS STOP SIGN.
4. DISTANCES ARE APPROXIMATE.

LEGEND

R2-1	SPEED LIMIT SIGN
R3-9B	TWO-WAY LEFT TURN ONLY SIGN
R8-3A	NO PARKING SIGN



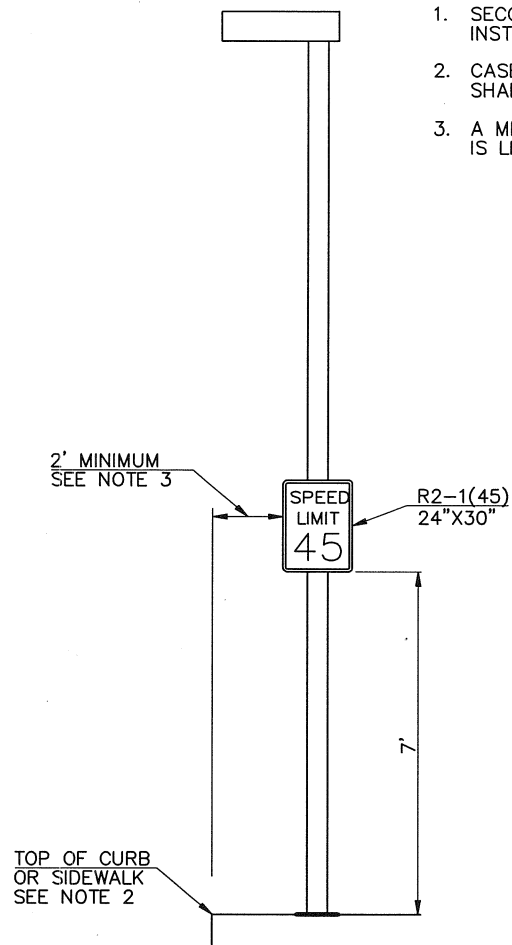
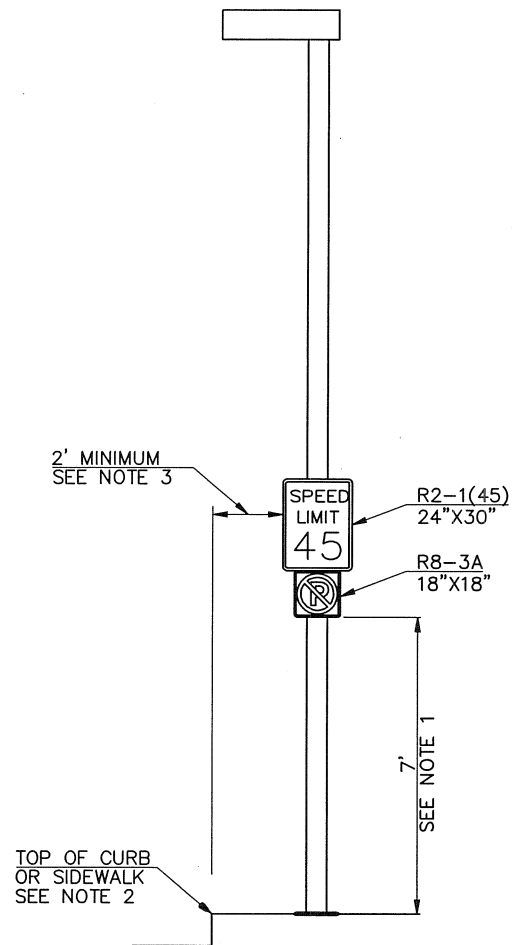
ARTERIAL (SECTION LINE) ST.

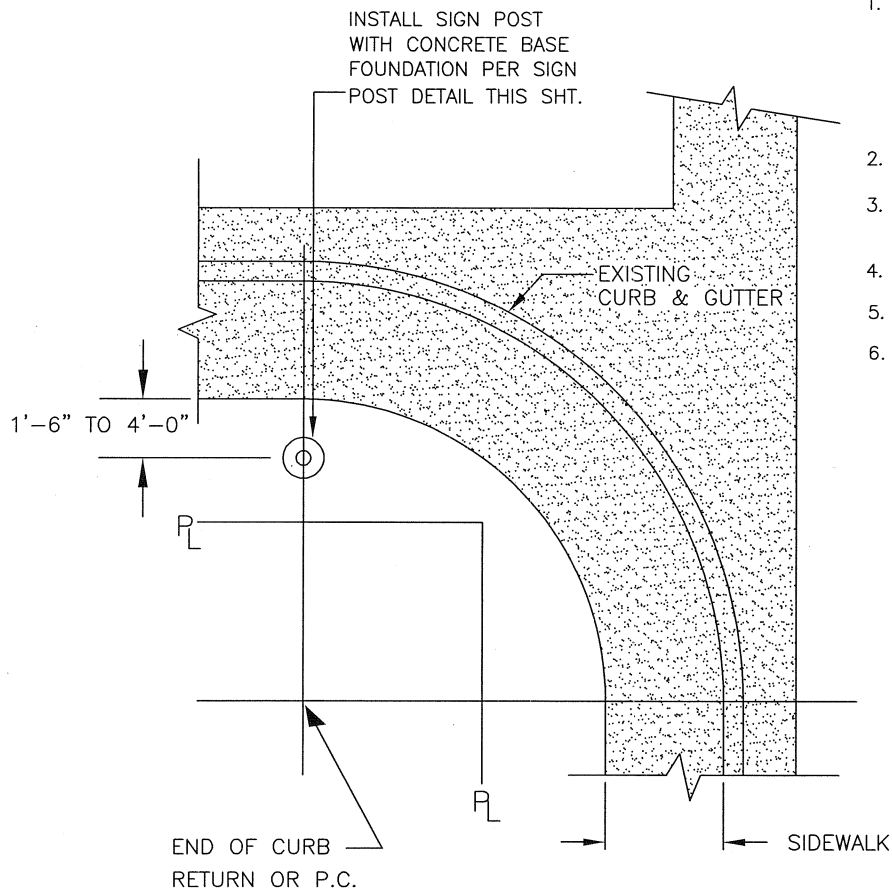
TYPICAL SIGNING FOR ARTERIAL STREETS

DETAIL NO.
M-22.1

NOTES:

1. SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN SHALL NOT BE INSTALLED LESS THAN 7 FEET IN HEIGHT.
2. CASES WHERE CURBS OR SIDEWALKS DO NOT EXIST, HEIGHT OF SIGNS SHALL BE MEASURED FROM ROAD SURFACE.
3. A MINIMUM OFFSET OF 1 FOOT MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.



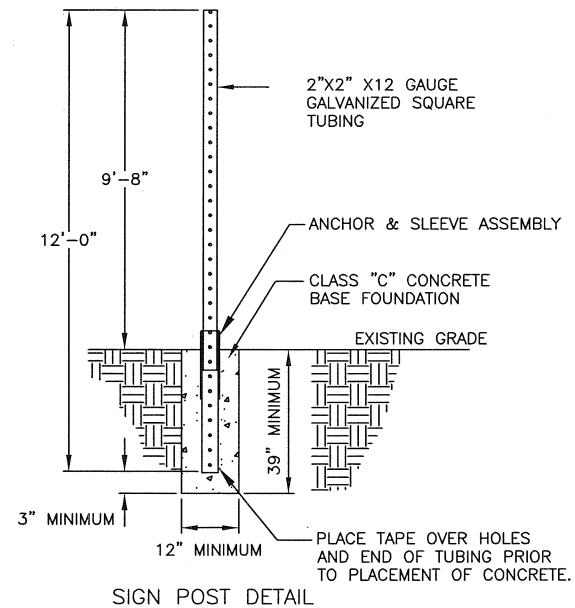


NOTES

1. INSTALL STREET SIGN POST BETWEEN 1'-6" TO 4'-0" BEHIND BACK OF SIDEWALK AS SHOWN. EXACT LOCATION WILL VARY WITHIN TOLERANCE SPECIFIED TO AVOID UNDERGROUND UTILITIES.

IF SIDEWALK DOES NOT EXIST, INSTALL STREET SIGN POST 6'-0" TO 8'-6" FROM EDGE OF PAVEMENT.

2. STREET SIGN BASE SHALL BE PLACED IN CLASS "C" CONCRETE PER MAG SECTION 725.
3. STREET SIGN POST SHALL BE 2"X2"X12 GAUGE GALVANIZED SQUARE TUBING WITH ANCHOR AND SLEEVE ASSEMBLY PER DETAIL M-39.
4. MIN. DISTANCE BETWEEN POST AND FIRE HYDRANT SHALL BE 6- FEET.
5. STREET SIGNS FURNISHED AND INSTALLED BY CITY UNLESS OTHERWISE NOTED.
6. SEE DETAIL M-21.3 FOR MAJOR AND COLLECTOR INTERSECTING STREET INSTALLATIONS.

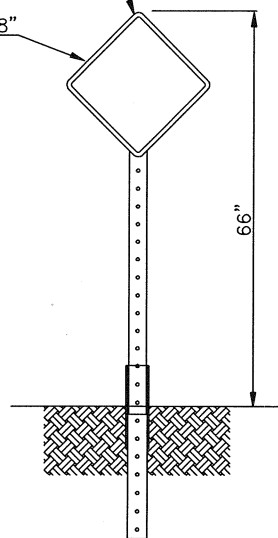


TYPICAL STREET NAME SIGN POST INSTALLATION

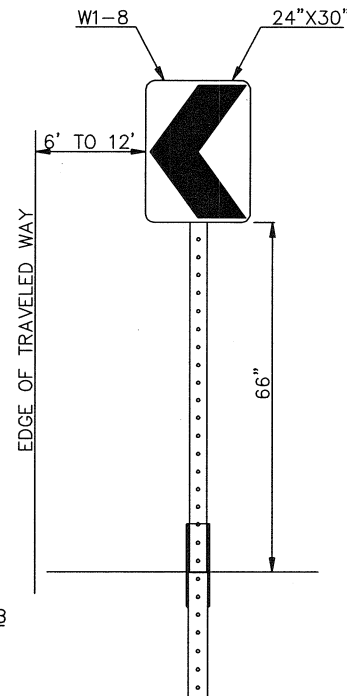
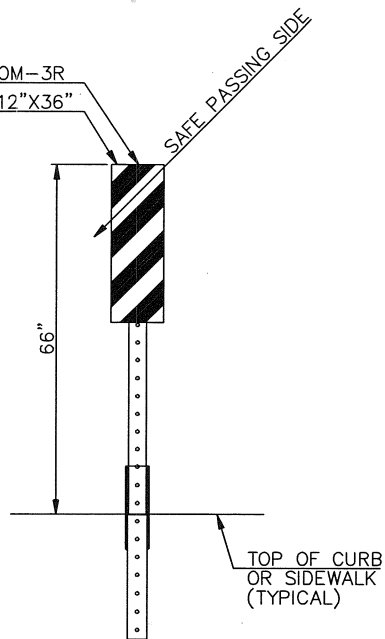
DETAIL NO.
M-22.3

TYPE 1 OBJECT MARKER
OR END OF ROAD MARKER

18"X18"

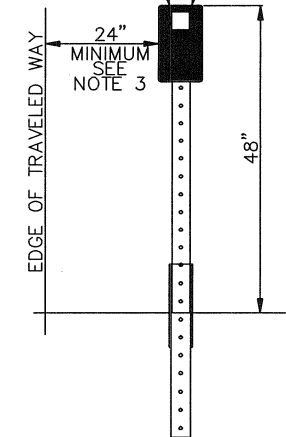


OM-3R
12"X36"



DELINEATOR
PER M-61

6"X12"

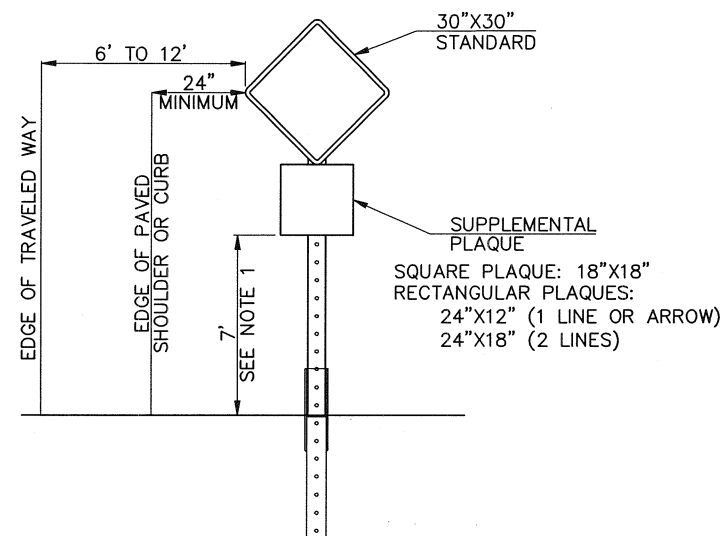
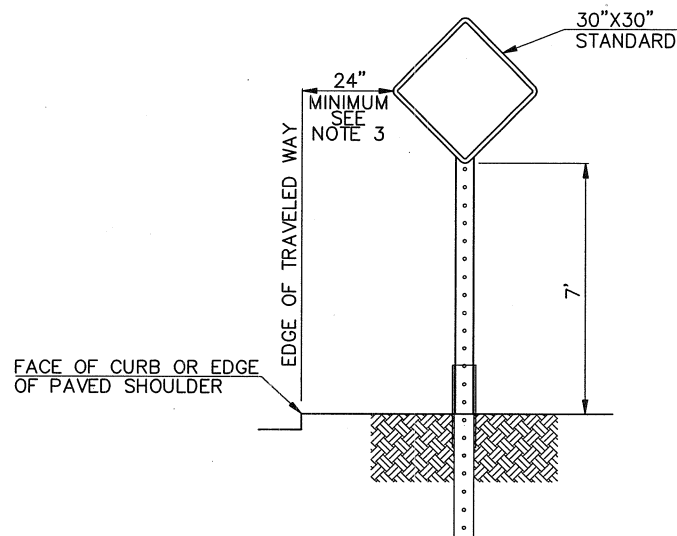


NOTES:

1. CASES WHERE CURBS OR SIDEWALKS DO NOT EXIST, HEIGHT OF SIGNS SHALL BE MEASURED FROM ROAD SURFACE.
2. POSTS SHALL BE PER M-39. SOME SOIL CONDITIONS MAY DICTATE PLACING THE POST DEEPER.
3. A MINIMUM OFFSET OF 1 FOOT MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.

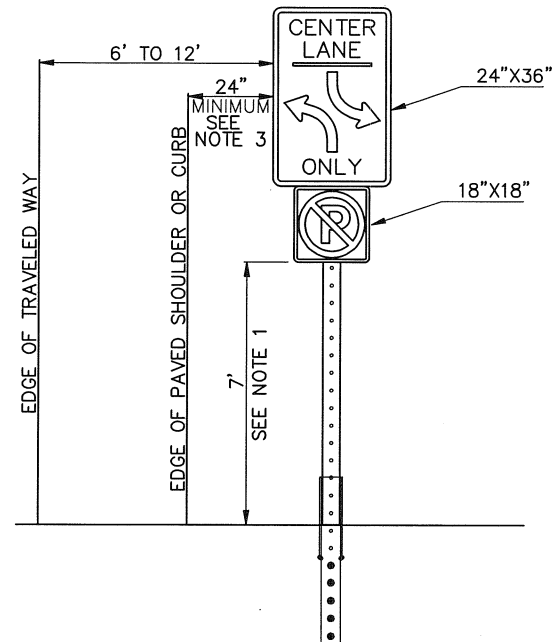
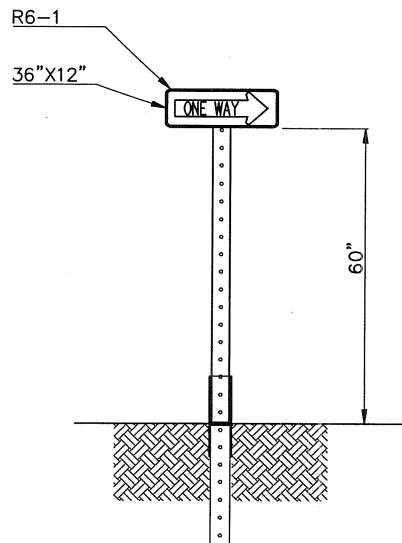
OBJECT AND END OF ROAD MARKERS, CHEVRON AND
DELINEATOR INSTALLATION

DETAIL NO.
M-23.1



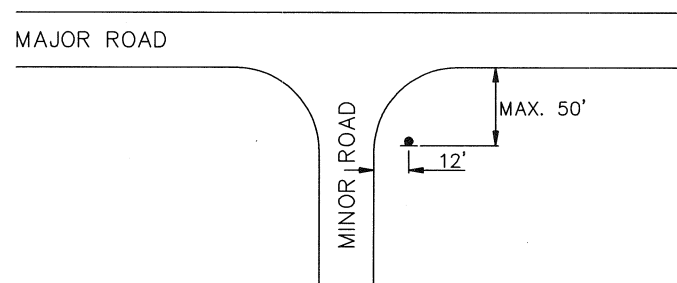
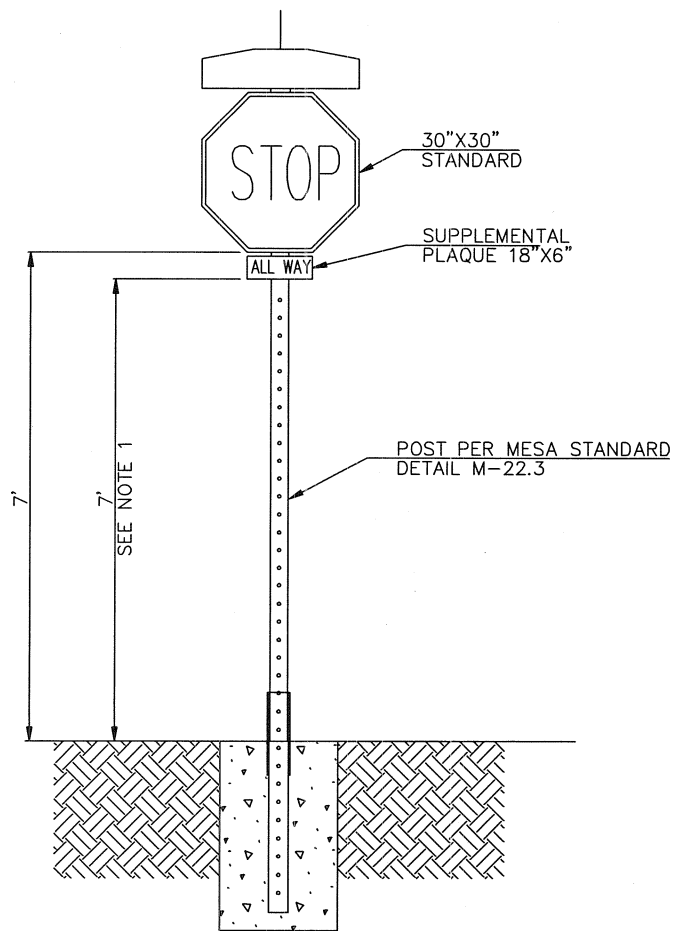
NOTES:

1. SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN SHALL NOT BE LESS THAN 7 FEET IN HEIGHT.
2. POSTS SHALL BE PER M-39. SOME SOIL CONDITIONS MAY DICTATE PLACING THE POST DEEPER.
3. A MINIMUM OFFSET OF 1 FOOT MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.

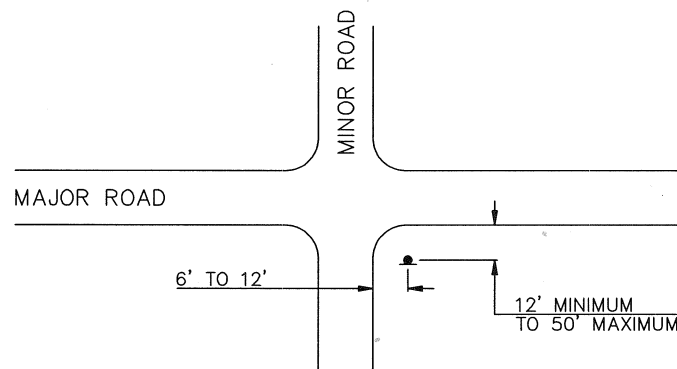


NOTES:

1. CASES WHERE CURBS OR SIDEWALKS DO NOT EXIST, HEIGHT OF SIGNS SHALL BE MEASURED FROM ROAD SURFACE.
2. POSTS SHALL BE PER M-39. SOME SOIL CONDITIONS MAY DICTATE PLACING THE POST DEEPER.
3. A MINIMUM OFFSET OF 1 FOOT MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.



WIDE THROAT INTERSECTION



CROSSROAD INTERSECTION

NOTES:

1. SUPPLEMENTAL PLAQUE MOUNTED BELOW ANOTHER SIGN SHALL NOT BE LESS THAN 7 FEET IN HEIGHT.
2. FOR SQUARE TUBING SIGN POST INSTALLATION, SEE M-22.3
3. FOR SIGNS EXCEEDING 2000 SQ. INCHES, SEE M-39.

STANDARD CLEARANCES AND LOCATION FOR STOP SIGNS

DETAIL NO.
M-23.4

POSTED SPEED *	ADVANCE WARNING SIGN DISTANCE ¹						
	CONDITION A: HIGH JUDGEMENT REQUIRED ² (MUTCD 2000)	CONDITION "B": DECELERATION TO THE LISTED ADVISORY SPEED (MPH) FOR THE CONDITION ⁴ (MUTCD 2003)					
		0 ³	10	20	30	40	50
20 MPH	175 FT	N/A ⁵	N/A ⁵	—	—	—	—
25 MPH	250 FT	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—
30 MPH	325 FT	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—
35 MPH	400 FT	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵	—	—
40 MPH	475 FT	125 FT	N/A ⁵	N/A ⁵	N/A ⁵	—	—
45 MPH	550 FT	175 FT	125 FT	N/A ⁵	N/A ⁵	N/A ⁵	—
50 MPH	625 FT	250 FT	200 FT	150 FT	100 FT	N/A ⁵	—
55 MPH	700 FT	325 FT	275 FT	225 FT	175 FT	100 FT	N/A ⁵
60 MPH	775 FT	400 FT	350 FT	300 FT	250 FT	175 FT	N/A ⁵
65 MPH	850 FT	475 FT	425 FT	400 FT	350 FT	275 FT	175 FT

TABLE 2C-4 GUIDELINES FOR ADVANCE PLACEMENT OF WARNING SIGNS (MUTCD 2000 EDITION) FOR CONDITION A.

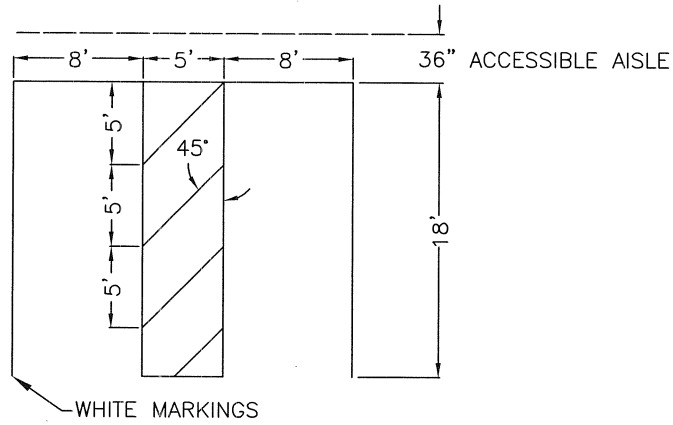
TABLE 2C-4 GUIDELINES FOR ADVANCE PLACEMENT OF WARNING SIGNS (MUTCD 2003 EDITION) FOR CONDITION B.

* THE DESIRED WARNING SIGN PLACEMENT DISTANCE IS BASED ON THE DESIGN SPEED, WHICH IS THE POSTED SPEED LIMIT PLUS 5 MPH. IF THESE DISTANCES ARE NOT MET IN THE FIELD, CONTACT THE TRAFFIC STUDIES GROUP FOR ASSISTANCE.

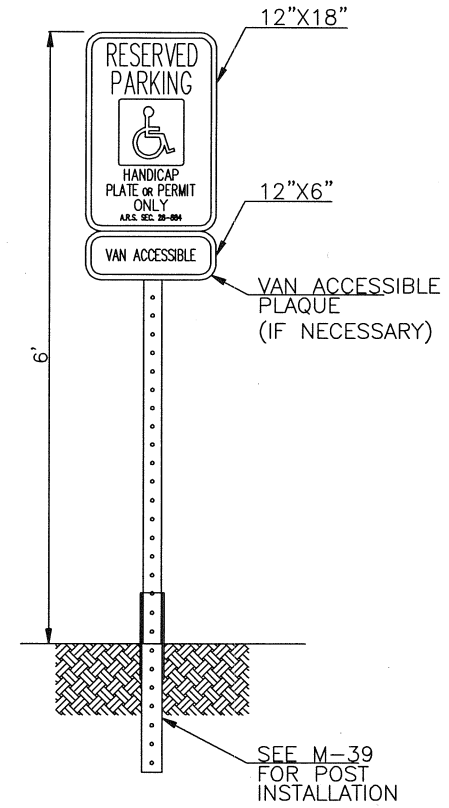
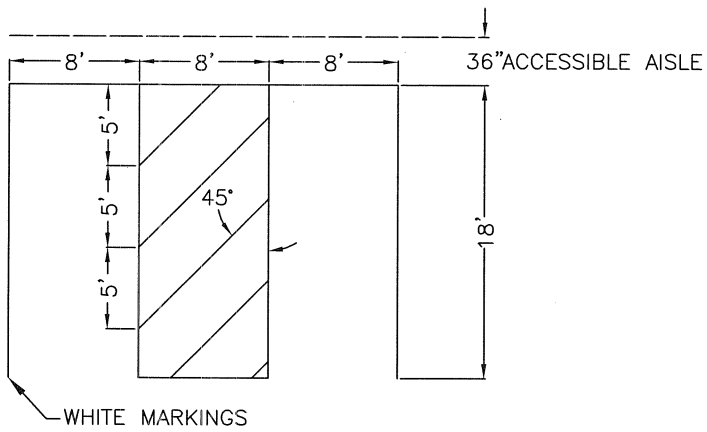
NOTES:

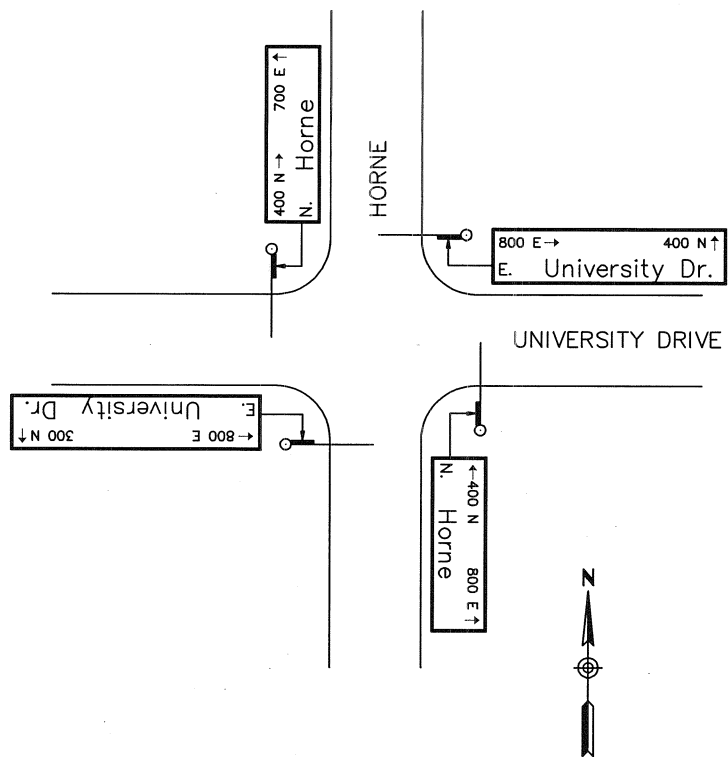
1. THE DISTANCES ARE ADJUSTED FOR A SIGN LEGIBILITY DISTANCE OF 175 FEET FOR CONDITION A. THE DISTANCES FOR CONDITION B HAVE BEEN ADJUSTED FOR A SIGN LEGIBILITY DISTANCE OF 250 FEET, WHICH IS APPROPRIATE FOR AN ALIGNMENT WARNING SYMBOL SIGN.
2. TYPICAL CONDITIONS ARE LOCATIONS WHERE THE ROAD USER MUST USE EXTRA TIME TO ADJUST SPEED AND CHANGE LANES IN HEAVY TRAFFIC BECAUSE OF A COMPLEX DRIVING SITUATION. TYPICAL SIGNS ARE MERGE, RIGHT LANE ENDS, ETC. THE DISTANCES ARE DETERMINED BY PROVIDING THE DRIVER A PIEV TIME OF 6.7 TO 10.0 SECONDS PLUS 4.5 SECONDS FOR VEHICLE MANEUVERS MINUS THE LEGIBILITY DISTANCE OF 175 FEET FOR THE APPROPRIATE SIGN.
3. TYPICAL CONDITION IS THE WARNING OF A POTENTIAL STOP SITUATION. TYPICAL SIGNS ARE STOP AHEAD, YIELD AHEAD, SIGNAL AHEAD, AND INTERSECTION WARNING SIGNS. THE DISTANCES ARE BASED ON THE 2001 AASHTO POLICY FOR STOPPING SIGHT DISTANCE, EXHIBIT 3-1, PROVIDING A PIEV TIME OF 2.5 SECONDS, A DECELERATION RATE OF 11.2 FEET/SQ. SECOND, MINUS THE SIGN LEGIBILITY DISTANCE OF 175 FEET.
4. TYPICAL CONDITIONS ARE LOCATIONS WHERE THE ROAD USER MUST DECREASE SPEED TO MANEUVER THROUGH THE WARNED CONDITION. TYPICAL SIGNS ARE TURN, CURVE, OR REVERSE CURVE. THE DISTANCE IS DETERMINED BY PROVIDING A 2.5 SECOND PIEV TIME, A VEHICLE DECELERATION RATE OF 10 FEET/SQ. SECOND, MINUS THE SIGN LEGIBILITY DISTANCE OF 250 FEET.
5. NO SUGGESTED MINIMUM DISTANCES ARE PROVIDED FOR THESE SPEEDS, AS PLACEMENT LOCATION IS DEPENDENT ON SITE CONDITIONS AND OTHER SIGNING TO PROVIDE AN ADEQUATE ADVANCE WARNING FOR THE DRIVER.

TYPICAL
HANDICAP
STALL
MARKINGS

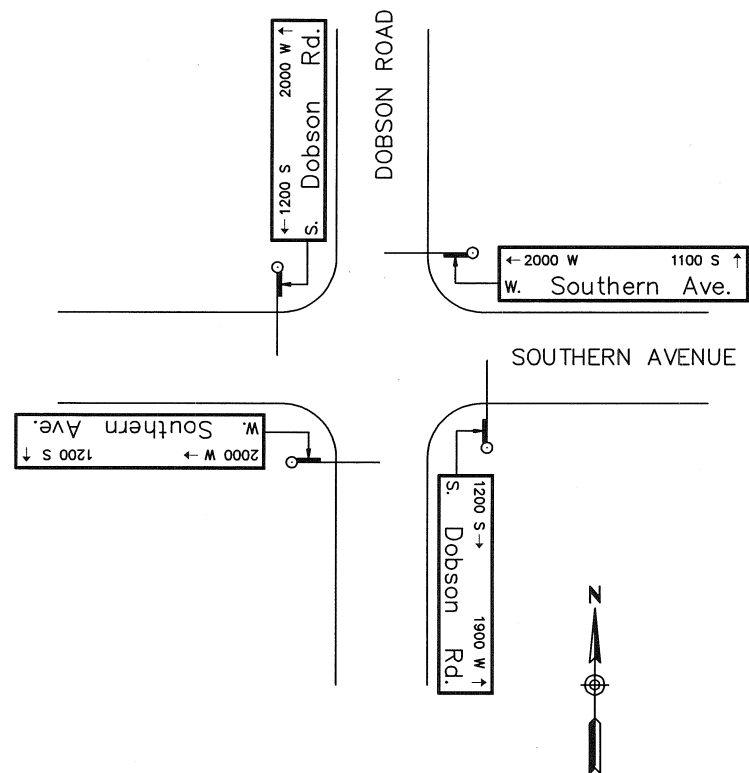


VAN
ACCESSIBLE
HANDICAP
STALL
MARKINGS



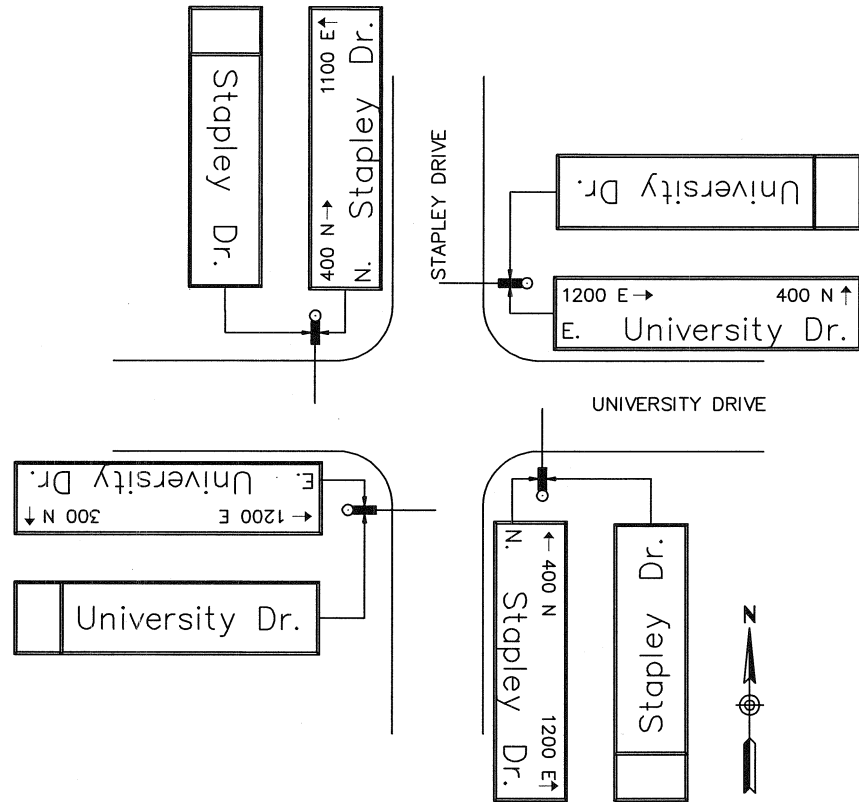


CONVENTIONAL METROS

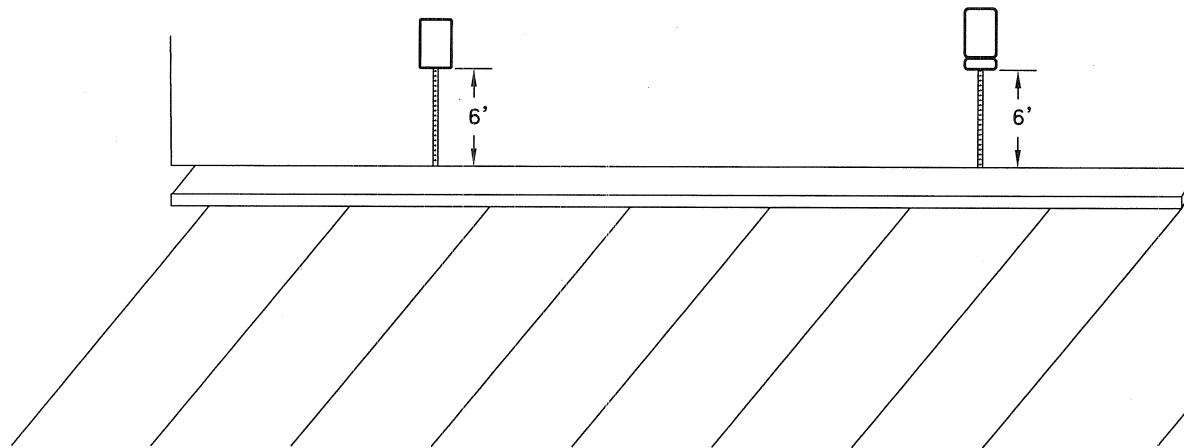


CONVENTIONAL METROS,
SOUTHWEST AREA EXAMPLE

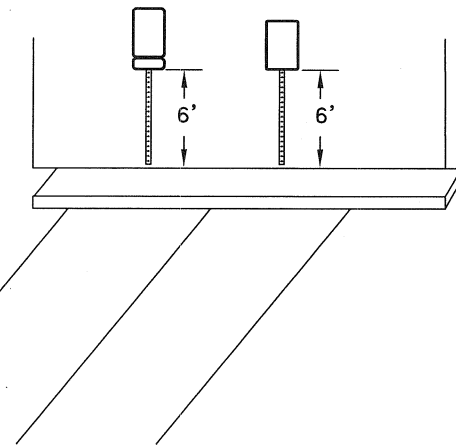
INTERNALLY ILLUMINATED STREET NAME SIGNS



AREA SIGNING



SINGLE STALL SIGNING

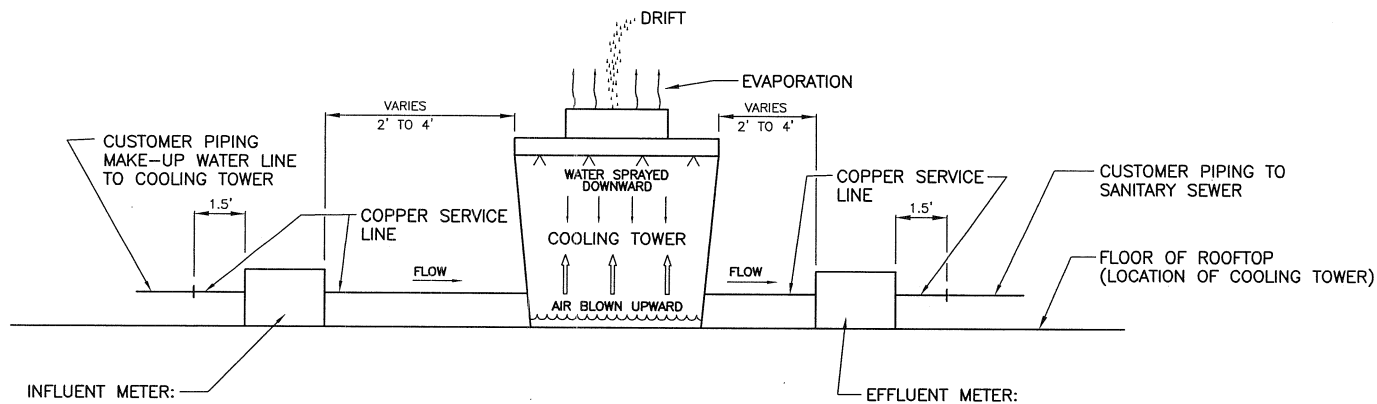


NOTES:

1. Except for Handicap Parking signs, all signs shall be mounted at a height of 6 feet as measured from the bottom of the sign.

Cases where curbs or sidewalks do not exist, height of signs shall be measured from road surface.

2. If conditions warrant a lower sign height, the sign should not be lower than 4 feet as measured from the bottom of the sign.
3. ARS 28-882 restricts the height of Handicap Parking signs to between 3 ft. and 6 ft. above grade. See M.S.D. M-23.6 for mounting height details for Handicap Parking signs.



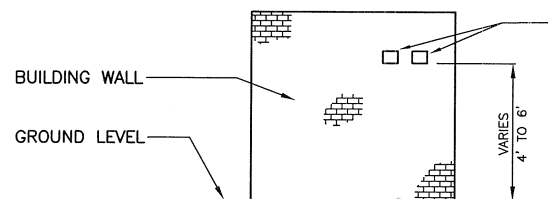
INFLUENT METER:

COPPER SERVICE LINE, CURB STOP WITH LOCKING WINGS AND METER BOX WITH COVER PER CITY OF MESA DETAIL M-49.1 AND 49.2. ELECTRICAL WIRING FOR GROUND LEVEL METER READOUT DEVICE INSTALLED IN SCHEDULE 40 PVC TO REMOTE READOUT LOCATION.

EFFLUENT METER:

COPPER SERVICE LINE, CURB STOP WITH LOCKING WINGS AND METER BOX WITH COVER PER CITY OF MESA DETAIL M-49.1 AND 49.2. ELECTRICAL WIRING FOR GROUND LEVEL METER READOUT DEVICE INSTALLED IN SCHEDULE 40 PVC TO REMOTE READOUT LOCATION.

METER PLACEMENT AT COOLING TOWER



GROUND LEVEL METER READOUT DEVICES FOR COMMERCIAL SITES

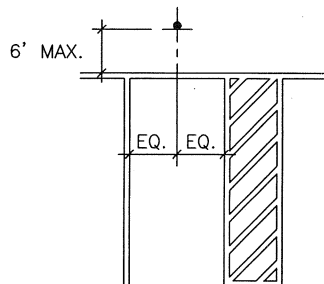
- WITH RESTRICTED PUBLIC ACCESS, SHALL BE LOCATED ON PERIMETER WALLS ADJACENT TO PUBLIC STREETS TO FACILITATE METER READER ACCESS.
- WITH UNRESTRICTED PUBLIC ACCESS, MAY BE LOCATED ON EXTERIOR BUILDING WALLS THAT WILL ACCOMMODATE METER READER ACCESS VIA THE PUBLIC PARKING LOT OR FIRE LANES.

GROUND LEVEL METER READOUT DEVICE PLACEMENT

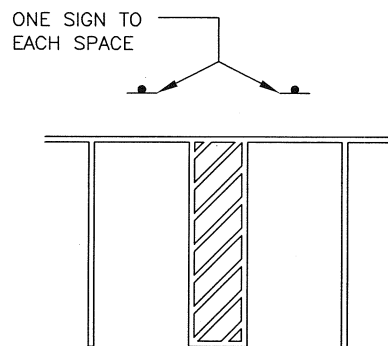
NOTE:
BUILDING INSPECTIONS DEPARTMENT
PLUMBING AND ELECTRICAL PERMITS
REQUIRED FOR INSTALLATION

SUBTRACTIVE METER

DETAIL NO.
M-25

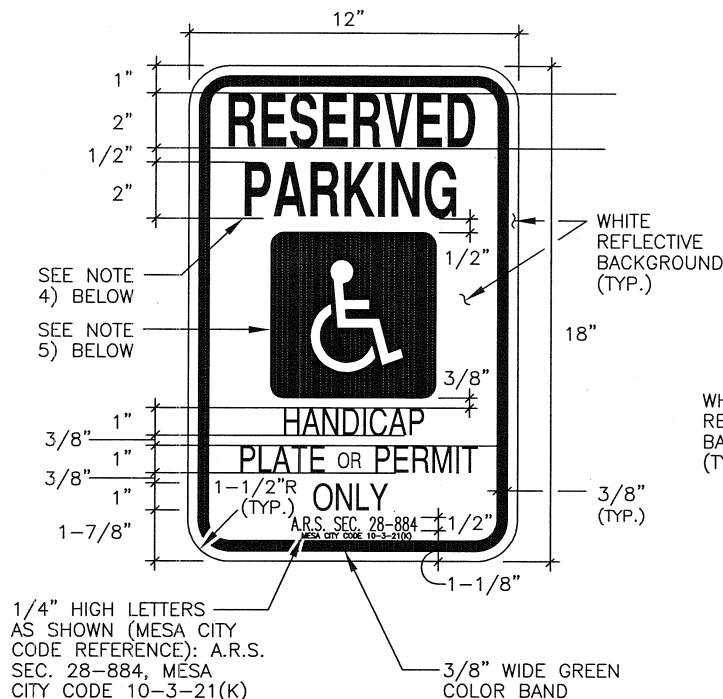


SINGLE SPACE



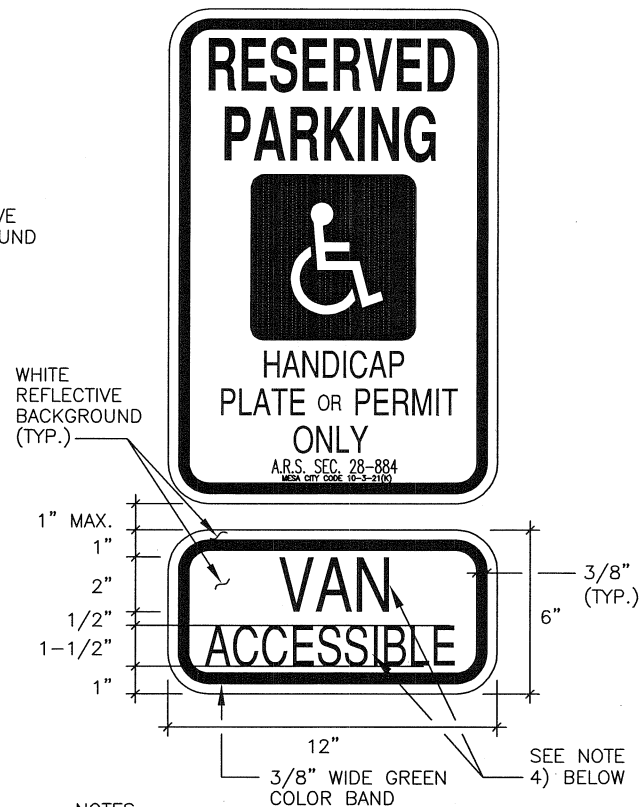
MULTIPLE SPACES

ACCESSIBLE PARKING SIGN
STANDARD AS DESIGNATED
BY THE CITY OF MESA
ORDINANCE NO. 1889 (TITLE
10, CHAPT. 3, SECT. 21K)
EFFECTIVE DEC. 19, 1984.



NOTES:

- 1) THE TOP OF THE SIGN SHALL BE 72 INCHES ABOVE FINISH GRADE.
- 2) SIGNS SHALL BE PROPERLY CENTERED WITHIN THE PARKING SPACE.
- 3) THE SIGN FACE SHOULD BE LOCATED NO FARTHER THAN 6 FEET FROM THE FRONT OF EACH PARKING SPACE.
- 4) ALL LETTERING SERIES 'C' GREEN COLOR.
- 5) INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOWN WHITE ON 6"X6" BLUE FIELD WITH 1/2 INCH RADIUS CORNERS.



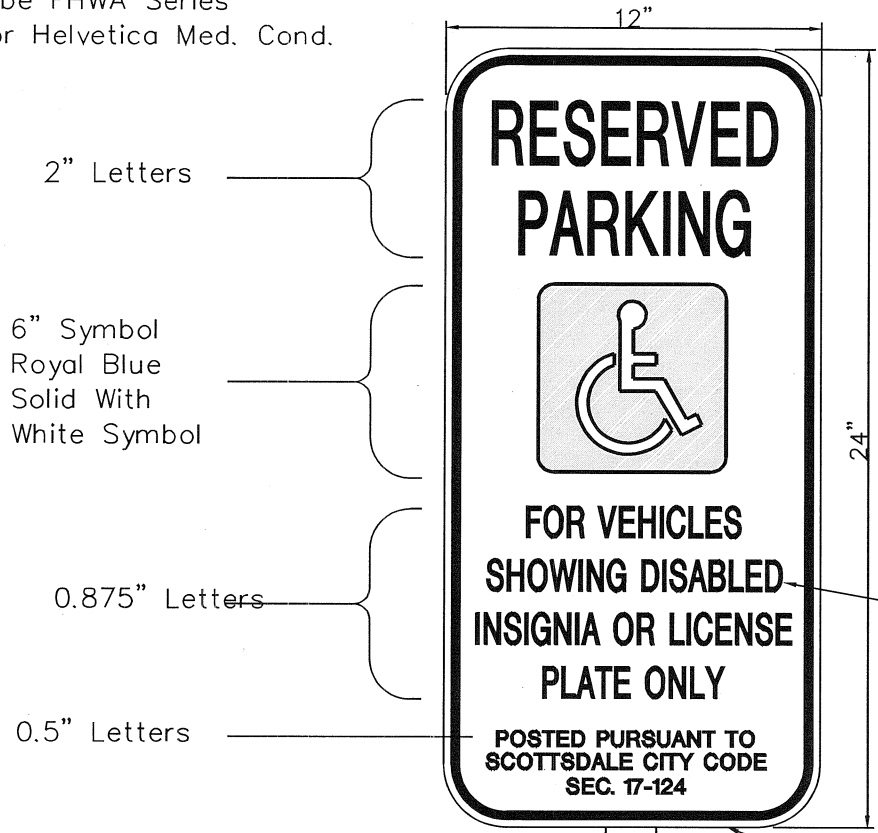
NOTES:

- 1) THE BOTTOM OF THE VAN ACCESSIBLE SIGN SHALL BE 48 INCHES ABOVE FINISH GRADE.
- 2) THE VAN ACCESSIBLE SIGN SHALL BE CENTERED UNDER THE ACCESSIBLE PARKING SIGN AS SHOWN.
- 3) FOR MORE INFORMATION ON RESERVED PARKING SIGN, SEE ACCESSIBLE PARKING SIGN DETAIL LEFT.
- 4) ALL LETTERING SERIES 'C' GREEN COLOR.

REVISED 2/26/01

NOTE:

Lettering shall be FHWA Series
"B" alphabet, or Helvetica Med. Cond.



MOUNTING OPTIONS (SEE PLANS)

- A) Flexible P.E. Post With Surface Mount Base – Epoxy To Pavement Surface
- B) Perforated Galvanized Tubing Per COS Detail 2131. Install In Landscape Areas Only.
- C) Surface Mount To Structure
- D) Mount As Detailed On Plans

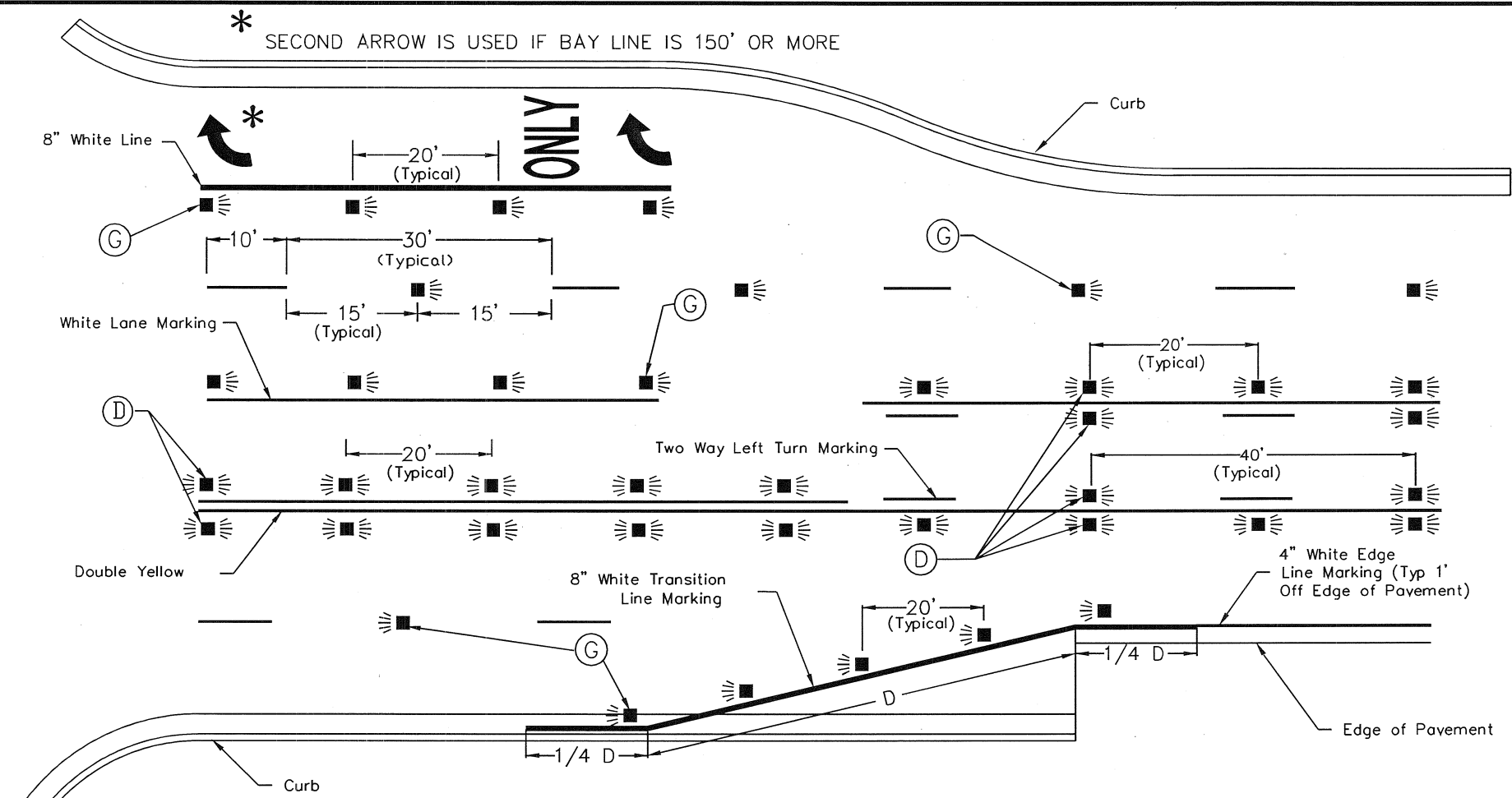
Green Borders and Text,
and Blue Symbol on White
Retroreflective Background (Typ.)
Background: Super
Engineer Grade Or
High Intensity Sheeting
Copy: Same As Above
Substrate: 0.080 Gauge
Treated Aluminum

Bottom Of Sign Shall Be
Not Less Than 3 Feet
Nor More Than 6 Feet
Above Finish Surface

ACCESSIBLE SIGNAGE

One Sign At Each
Accessible Parking Stall

REVISED 5/25/05



REFERENCE ADOT STD DRAWING M-19 FOR RAISED PAVEMENT MARKERS.

SEE STANDARD DETAIL 2363 FOR FIRE HYDRANT MARKERS

LEGEND

- (G) - TYPE "G" WHITE, ONE WAY REFLECTIVE
- (D) - TYPE "D" YELLOW, TWO WAY REFLECTIVE

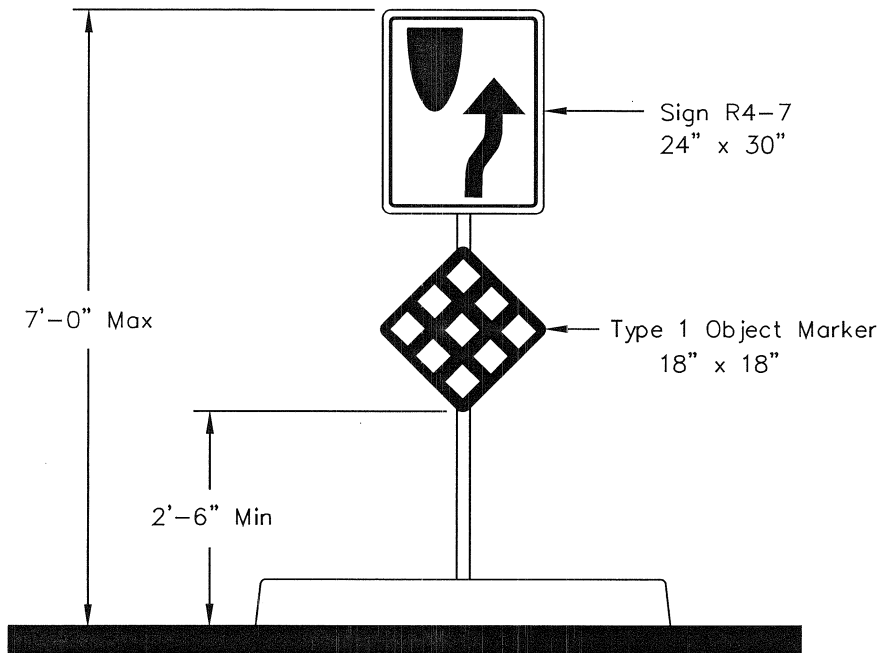
DETAIL NO.
2132

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

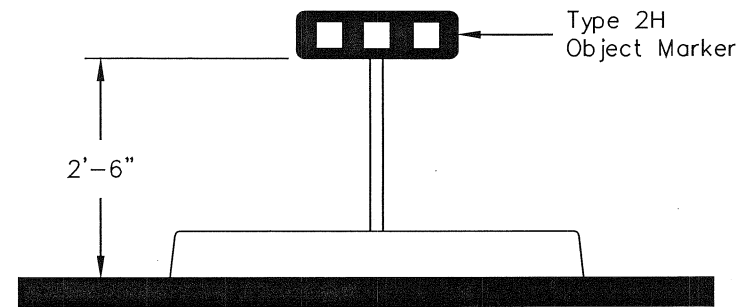
RAISED PAVEMENT MARKER LAYOUT

DETAIL NO.
2132



TYPE "A"

(AT SIGNALIZED INTERSECTIONS
OR AS SHOWN ON PLANS AND FIRST &
LAST NOSE ON A STRING OF MEDIANS)



TYPE "B"

(ALL OTHER MEDIANS)

NOTES:

1. See COS Std Det 2225 Or 2226
For Typical Location.
2. Sign Posts Per COS Std Det 2131.

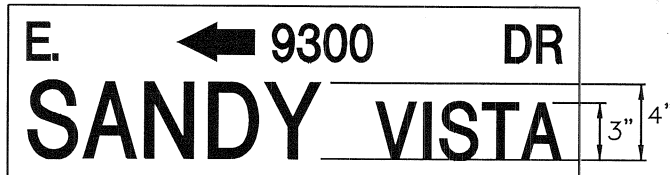
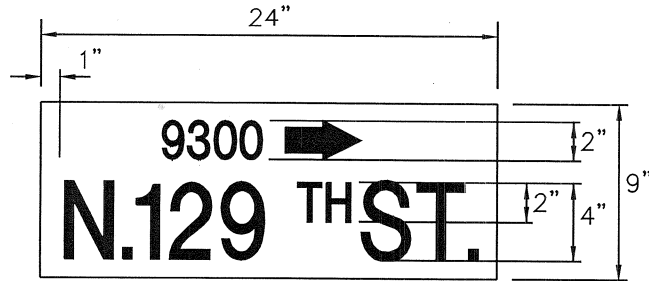
DETAIL NO.
2133

City of Scottsdale
Standard Details

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

MEDIAN NOSE SIGNING-TYPE A&B

DETAIL NO.
2133



TYPE A SIGNS

Type IIA Super Engineering Grade
Green/White (2 Sides)

Blank Sizes: 9"x 24", 9"x 30",
9"x 36", 9"x 42"

Intended Usage: Type "A" Street Name Signs shall be used in residential areas where Residential Streets intersect with Local Collector Streets. See the COS General Plan for Street Designations.

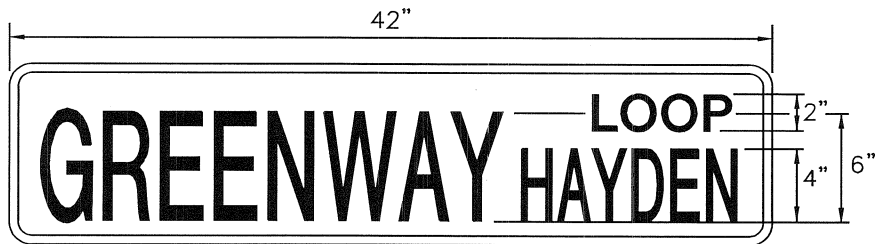
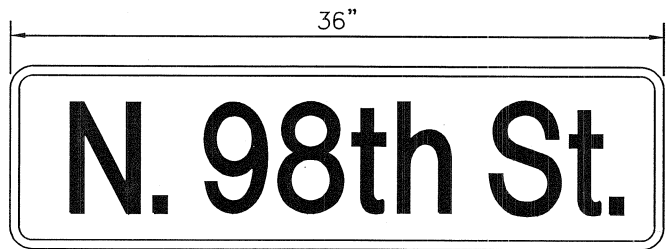
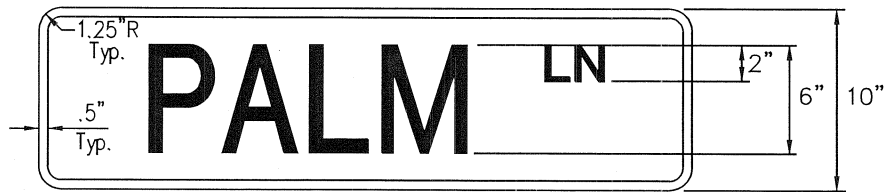
DETAIL NO.
2134-1

City of Scottsdale
Standard Details

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

STREET NAME SIGNS - TYPE A

DETAIL NO.
2134-1



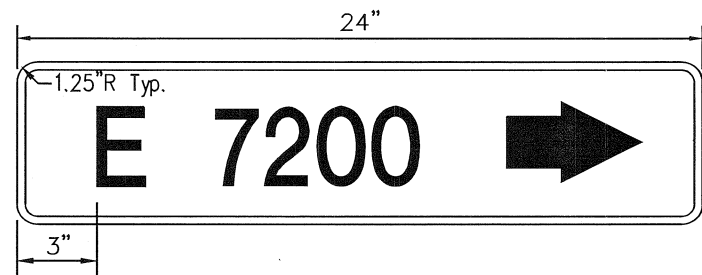
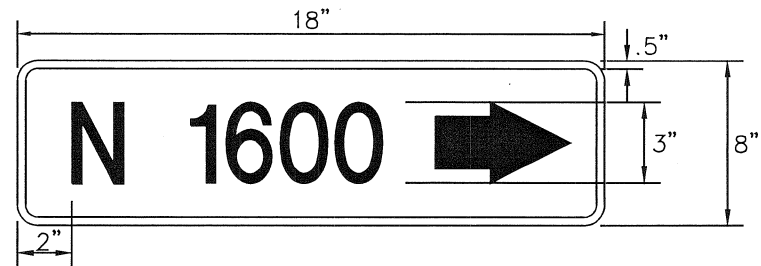
TYPE B SIGNS

Type III High Intensity Grade

Green/White (2 Sides)

Blank Sizes: 10"x 36", 10"x 42"

Intended Usage: Type "B" Street Name Signs shall be used where a Residential Street or a Local Collector Street intersects with a street with a classification of Major Collector or larger. See the COS General Plan for Street Designations.



TYPE B BLOCK NUMBERS

Type III High Intensity Grade

Green/White (1 Side)

Blank Sizes: 8"x 18", 8"x 24"

Type "B" Block Numbers to be mounted with Type "B" Street Name Signs.

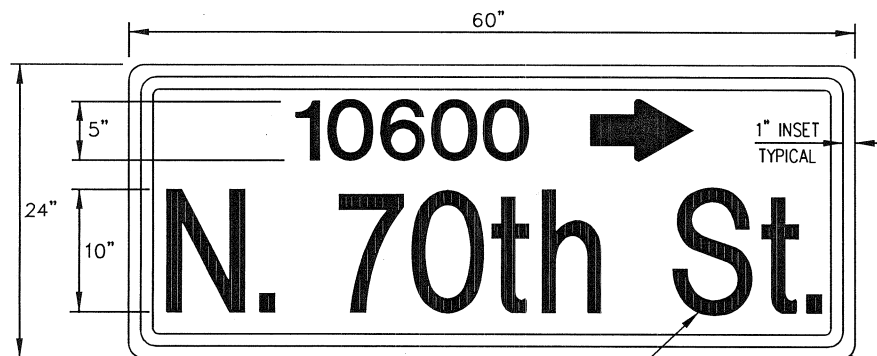
DETAIL NO.
2134-2

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

STREET NAME SIGNS - TYPE B

DETAIL NO.
2134-2



UPPER & LOWER CASE ON
NUMERIC STREET NAMES



USE SMALLER SIZE LETTERS
FOR THESE TYPES

1 1/2" R
TYPICAL



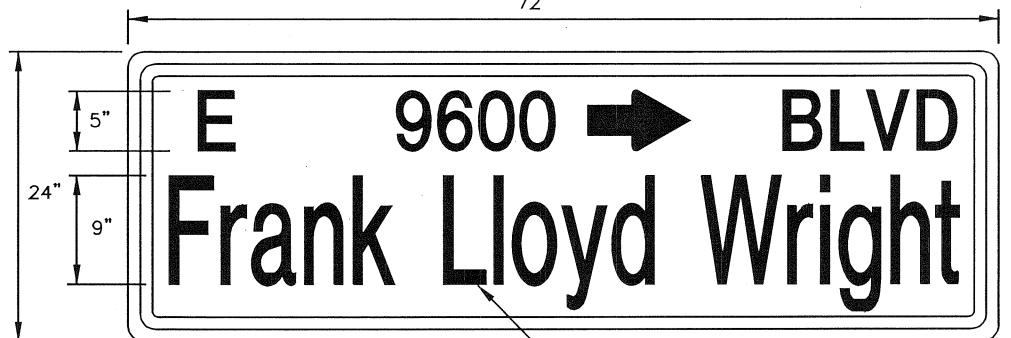
18" METRO SIGNS

Diamond Grade Intensity – Green/White (1 Side)

Typestyle = Highway Gothic, Modify C or D

Blank Sizes: 18"x 48", 18"x 60", 18" x 72"

Intended Usage: 18" Metro Street Name Signs shall be used on minor roads with a speed limit of 35MPH or lower. See the COS General Plan for Street Designations.



FOR STREET NAMES THAT WOULD EXCEED
MAXIMUM LENGTH SIGN BLANK USE 9"
UPPER AND LOWER CASE LETTERS

24" METRO SIGNS

Diamond Grade Intensity – Green/White (1 Side)

Typestyle = Highway Gothic, Modify C or D

Blank Sizes: 24"x 60", 24"x 72", 24" x 84"

Intended Usage: 24" Metro Street Name Signs shall be used on major roads with a speed limit of 35MPH or higher. See the COS General Plan for Street Designations.

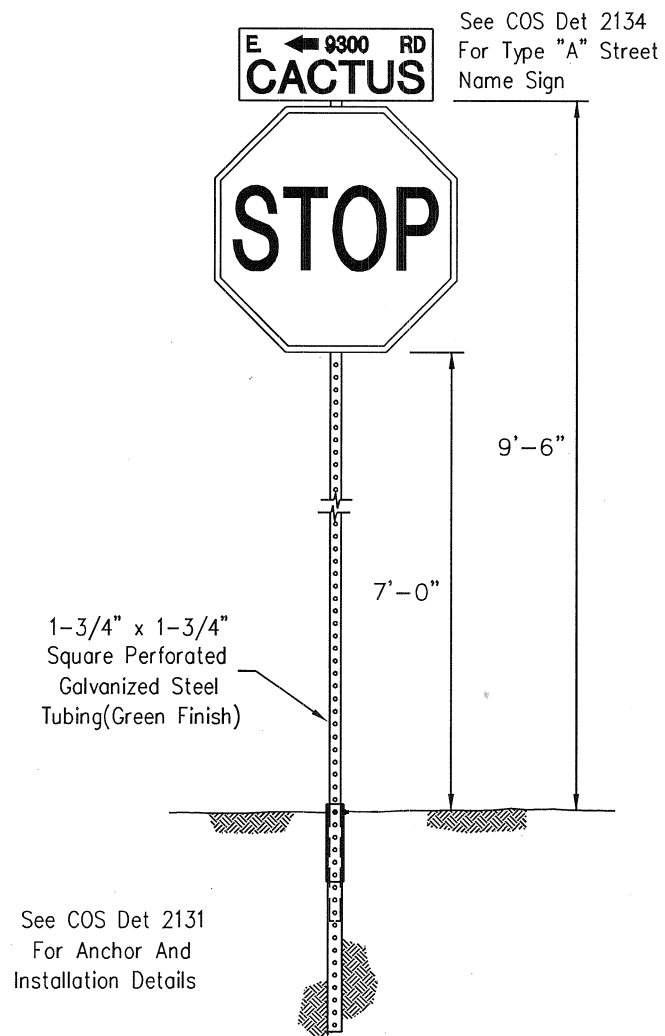
DETAIL NO.
2134-3

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

STREET NAME SIGNS - 18" AND 24" METRO

DETAIL NO.
2134-3



NOTES:

Street name sign and stop sign mounting height shall be measured from adjacent grade of sidewalk, top of curb or top of nearest pavement.

When no stop sign is required the street name sign is mounted at 9 feet 6 inches.

When two street name signs are mounted one on top of the other, the height is measured to the bottom sign.

DETAIL NO.
2135

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

STREET NAME SIGN INSTALLATION

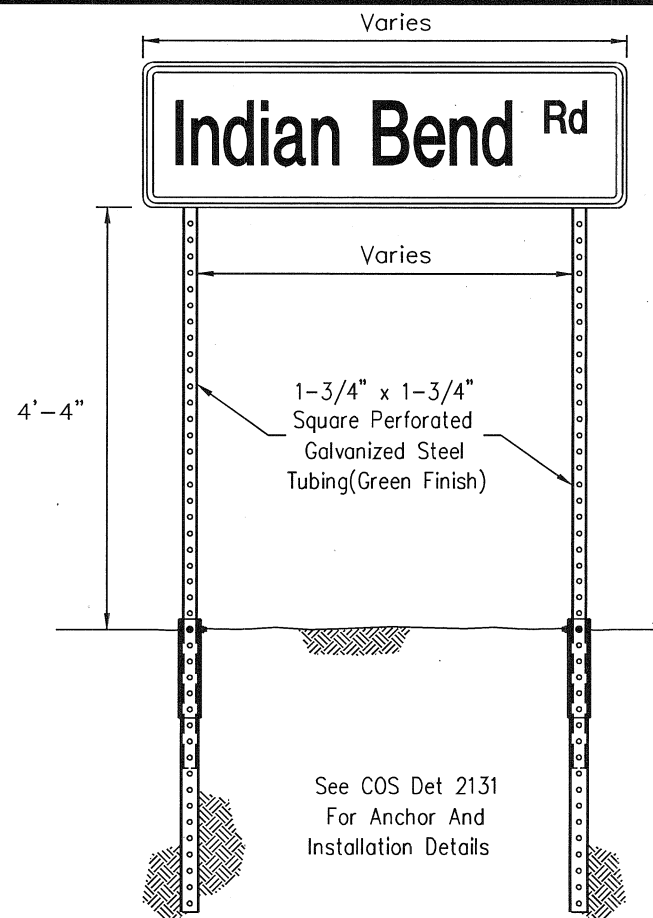
DETAIL NO.
2135



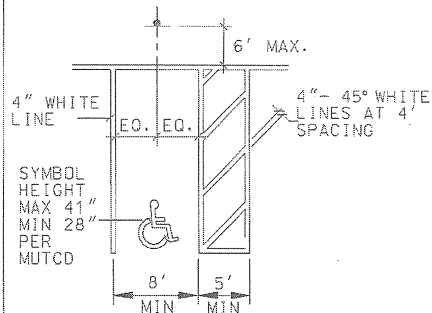
DETAIL NO.
2136

APPROVED BY:
Scottsdale Standards & Specifications Committee

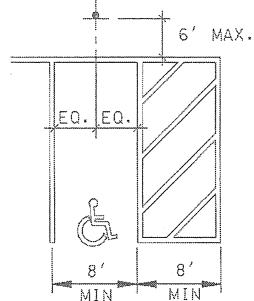
DETAIL NO.
2136



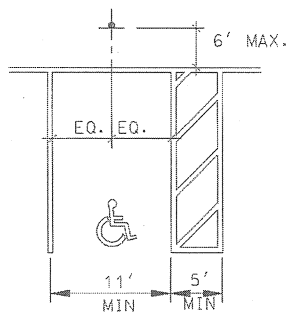
Intended Usage: To be used in advance of the specified street where an unsignalized collector street intersects a minor/major arterial or expressway. Location determined by multiplying the posted speed limit by 10. Sign is typically placed in a median when available, otherwise on the right hand side of the road.



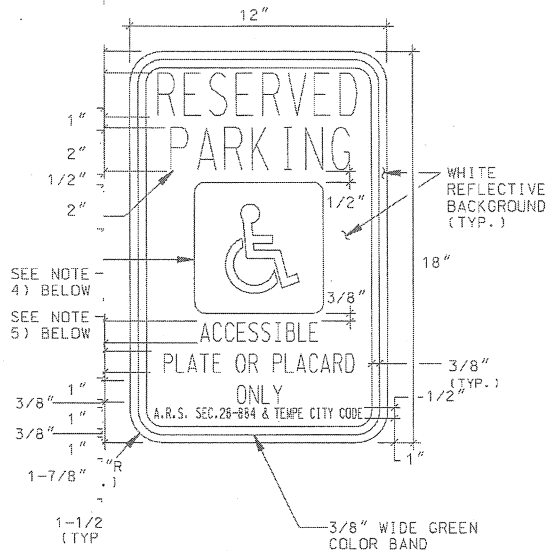
STANDARD SPACE



VAN ACCESSIBLE



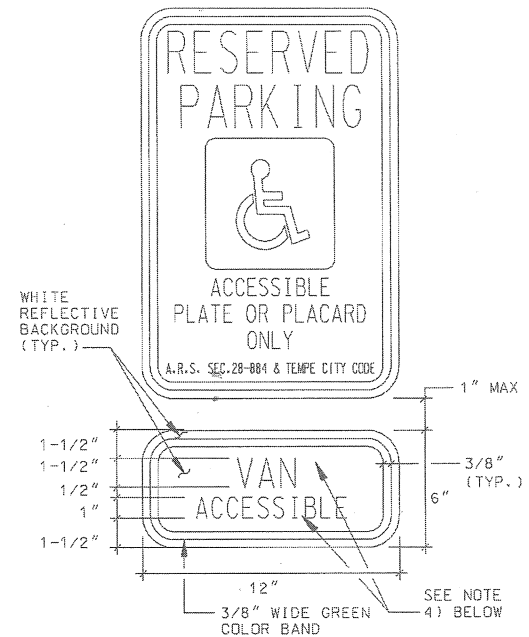
UNIVERSAL SPACE



ACCESSIBLE PARKING SIGN & PARKING SPACE:

THE BOTTOM OF THE SIGN SHALL BE NO LESS THAN 36 INCHES ABOVE FINISH GRADE. AND NO MORE THAN 72 INCHES ABOVE FINISH GRADE.

- 1) THE BOTTOM OF THE SIGN SHALL BE PROPERLY CENTERED ON THE 36 INCHES SPACE.
- 2) SIGNS SHALL BE LOCATED NO FARTHER THAN 6 FEET FROM THE FRONT OF EACH PARKING SPACE.
- 3) THE SIGN SHALL BE LOCATED NO FARTHER THAN 6 FEET FROM THE FRONT OF EACH PARKING SPACE.
- 4) ALL LETTERING SHALL BE IN WHITE ON 6"X6" BLUE FIELD WITH 1/2 INCH SPACING.
- 5) INTERNATIONAL SYMBOL OF ACCESSIBILITY PARKING SIGN SHALL BE PLACED IN EACH PARKING SPACE DESIGNATED FOR USE BY PERSONS WITH DISABILITIES. A BLUE BACKGROUND WITH WHITE BORDER MAY BE USED TO SUPPLEMENT THE WHEELCHAIR SYMBOL.
- 6) THE INTERNATIONAL SYMBOL OF ACCESSIBILITY PARKING SIGN SHALL BE PLACED IN EACH PARKING SPACE DESIGNATED FOR USE BY PERSONS WITH DISABILITIES. A BLUE BACKGROUND WITH WHITE BORDER MAY BE USED TO SUPPLEMENT THE WHEELCHAIR SYMBOL.
- 7) ACCESSIBLE PARKING SIGN & PARKING SPACE:



NOTES FOR VAN ACCESSIBLE SIGN:

- 1) THE BOTTOM OF THE VAN ACCESSIBLE SIGN SHALL BE NO LESS THAN 36 INCHES ABOVE FINISH GRADE.
- 2) THE VAN ACCESSIBLE SIGN SHALL BE CENTERED UNDER THE ACCESSIBLE PARKING SIGN AS SHOWN.
- 3) FOR MORE INFORMATION ON RESERVED PARKING SIGN, SEE ACCESSIBLE PARKING SIGN DETAIL LEFT.
- 4) ALL LETTERING SERIES 'D' GREEN COLOR.

APPROVED: _____ PUBLIC WORKS MANAGER _____ DATE _____

SIGNAGE/STRIPING FOR ADA ACCESSIBLE PARKING SPACES

DETAIL T-360
REVISED 2005

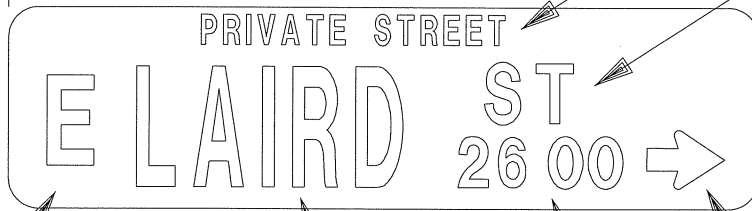


SIDE A

24", 30", 36", OR 42"

1-1/2"
SERIES C

3"
SERIES C



3"
SIDE B

DOUBLE FACED WHITE
REFLECTIVE LEGEND ON
GREEN REFLECTIVE BACKGROUND
(ENGINEER GRADE OR BETTER)

4-1/2"
SERIES B

6"
SERIES A OR B

3"
SERIES C

2-1/2" X 2-1/2"

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS DIRECTOR DATE

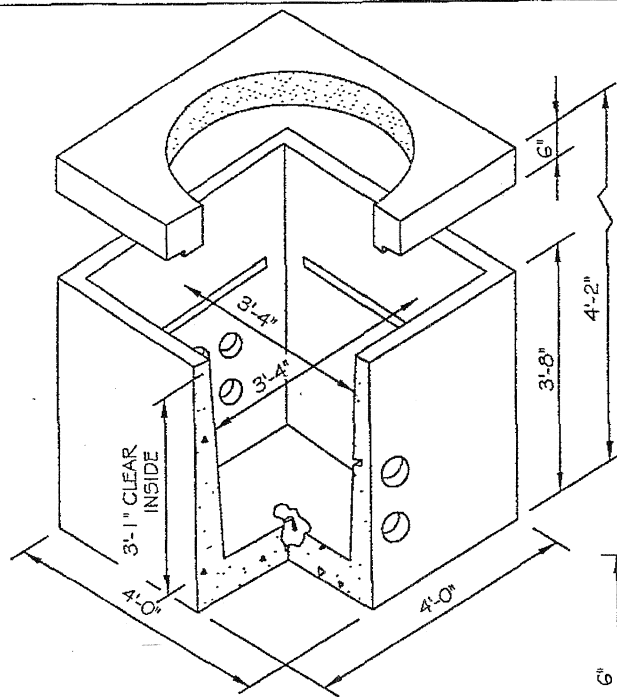
APPROVED: _____
CITY ENGINEER DATE



CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

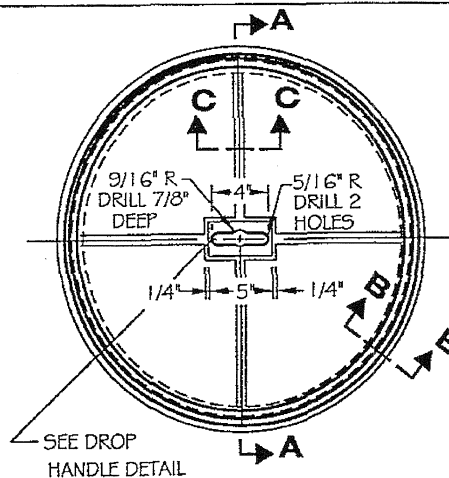
PRIVATE STREET NAME SIGN DIAGRAM

DETAIL T-655
REVISED 1998

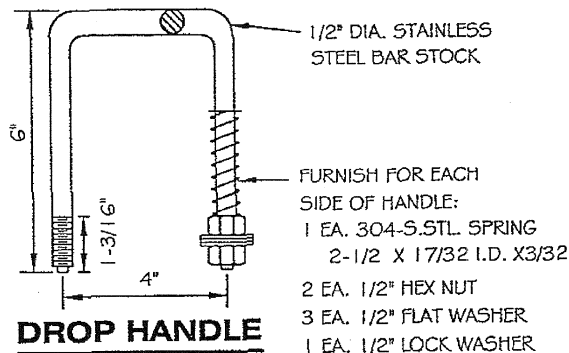


ISOMETRIC VIEW

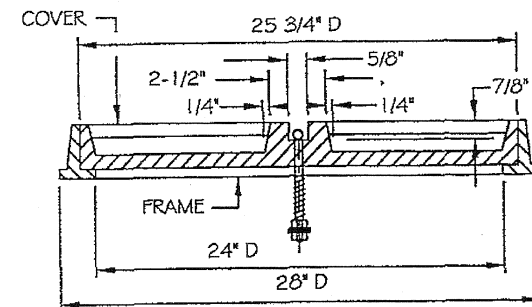
FIBER OPTIC CABLE SPLICING VAULT
UTILITY VAULT CO. #444-TA OR
APPROVED EQUIVALENT



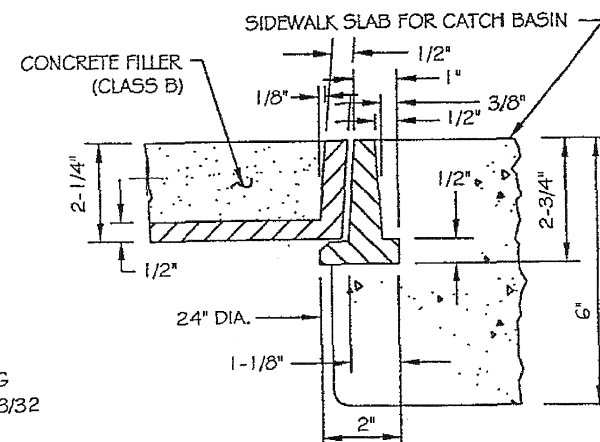
PLAN VIEW



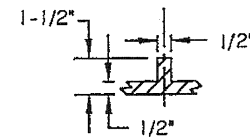
DROP HANDLE



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. FRAME SHALL BE NON-LOCKING.
2. FRAME AND COVER SHALL BE CAST IRON OR ASTM A-36 STEEL. HORIZONTAL SURFACE OF COVER IN CONTACT WITH FRAME SHALL BE MACHINED, ASA B-46 ROUGHNESS SHALL NOT EXCEED 1/32 INCH.
3. COVER SHALL BE FILLED WITH CONCRETE AND BROOM FINISHED.
4. SMALL VARIATIONS IN DIMENSIONS OF FEATURES OF A MINOR NATURE THAT ARE PART OF THE FOUNDRY'S CASTING ARE PERMISSIBLE.

DRAWING COURTESY OF UTILITY VAULT CO.

DETAIL NO.

C-103

NTS



CITY OF
CHANDLER
STANDARD
DETAIL

FIBER OPTIC CABLE SPLICING VAULT

APPROVED:

DATE:

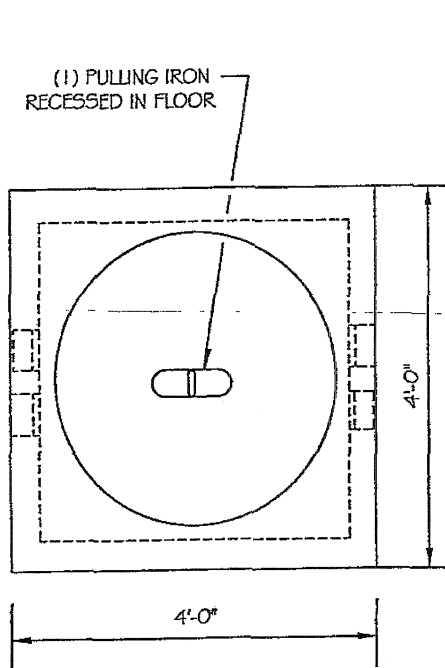
Ray D. Patterson
CITY ENGINEER

11-19-99

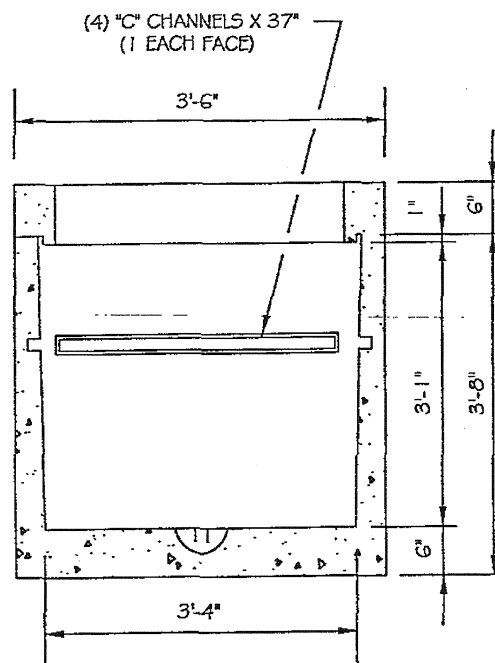
DETAIL NO.

C-103

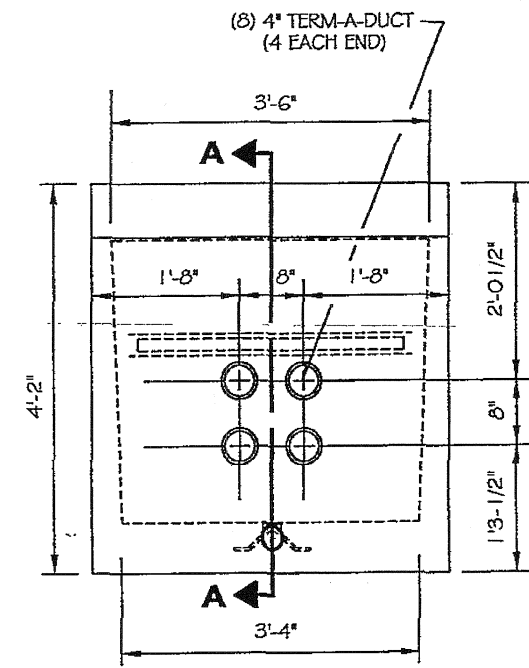
PAGE 1 OF 2



PLAN VIEW





SECTION VIEW A-A

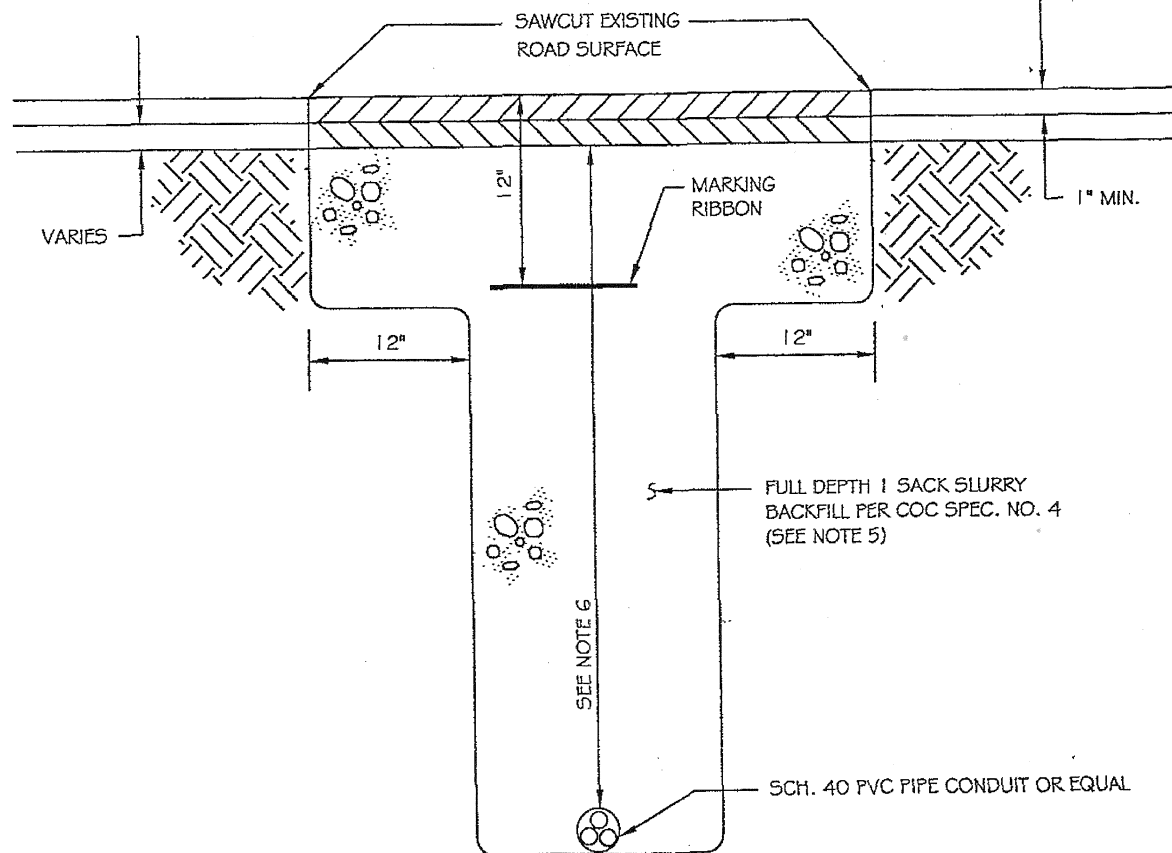


END VIEW

FIBER OPTIC CABLE SPLICING VAULT
UTILITY VAULT CO. #444-TA OR APPROVED EQUIVALENT

DRAWING COURTESY OF UTILITY VAULT CO.

DETAIL NO. C-103 NTS	 CITY OF CHANDLER STANDARD DETAIL	FIBER OPTIC CABLE SPLICING VAULT	APPROVED:  CITY ENGINEER DATE: 11-19-99	DETAIL NO. C-103 PAGE 2 OF 2
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NOTES:

1. MARKING RIBBON TO BE 3" MINIMUM WIDTH, 5 MIL THICK METALLIC DETECTABLE TAPE WITH THE MESSAGE "CAUTION - FIBER OPTIC CABLE BURIED BELOW".
2. FOR BORES OR PUSHES, STEEL SLEEVES MUST BE USED.
3. REPLACE ROAD SURFACE PER MAG STANDARD DETAIL 200 T' TOP.
4. INSTALLATION SHALL BE PER COC STD. SPEC. #8.
5. NATIVE MATERIAL CAN BE UTILIZED FOR BACKFILL IN P.U.E. OR MIN. 2 FEET FROM SURFACE IMPROVEMENTS.
6. DEPTH SHALL BE IN ACCORDANCE WITH MAG SPECIFICATION 360.

C-104
REPLACES
120



CITY OF
CHANDLER
STANDARD
DETAIL

FIBER OPTIC CABLE DUCTS

APPROVED:

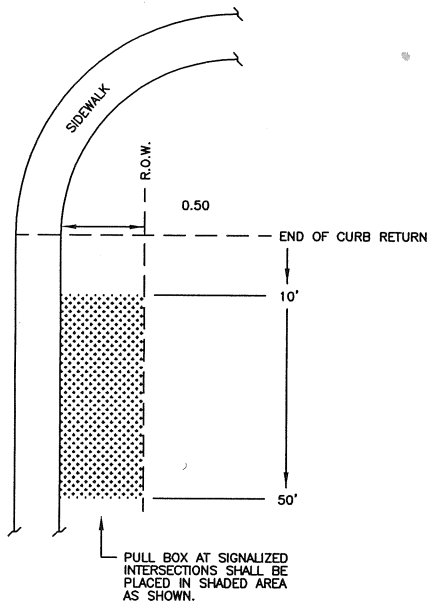
Dylan D. Patterson
CITY ENGINEER

DATE: 11-19-99

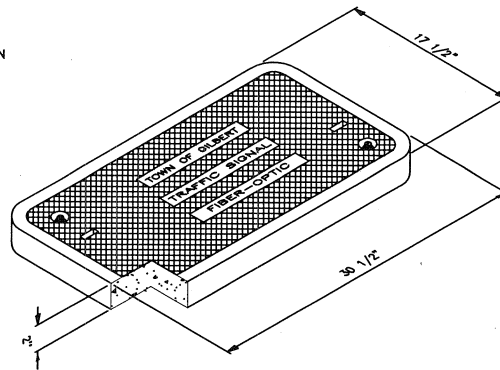
DETAIL NO.

C-104

NTS



TYPICAL PULL BOX LOCATION AT INTERSECTION



PULL BOX LID DETAIL (SEE NOTE 12)

GENERAL NOTES:

1. FIBER-OPTIC CONDUIT RUNS SHALL BE INSTALLED ON THE SAME SIDE OF THE STREET AS TRAFFIC SIGNAL CONTROL CABINET(S).
2. WHEN NEW STREETLIGHT CONDUIT IS BEING INSTALLED, THE CONDUIT FOR THE FIBER-OPTIC CABLE SHALL SHARE A COMMON TRENCH WITH THE STREETLIGHT CONDUIT.
3. REFER TO T.O.G. DETAIL 95 FOR PULL BOX INSTALLATION.
4. PULL BOX COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS "TOWN OF GILBERT TRAFFIC SIGNAL FIBER-OPTIC".
5. PULL BOXES SHALL BE SPACED APPROXIMATELY 1000' APART.
6. CABLE SHALL BE AS SPECIFIED IN NOTE 13 OR APPROVED EQUAL.
7. CABLE SHALL BE SUPPLIED ON 6000' REELS.
8. CABLE SHALL BE INSTALLED AS ONE CONTINUOUS PIECE WITH NO SPLICES.
9. ONE (1) GALLON OF WIRE PULLING "SOAP" SHALL BE USED PER 660' WHEN PULLING CABLE.
10. CONDUITS FOR FIBER SYSTEM SHALL BE BLOWN OUT WITH COMPRESSED AIR AND HAVE A METAL DISK MANDREL PULLED THROUGH BEFORE FIBER CABLE IS INSTALLED.

11. CONTRACTOR SHALL PERFORM AN "OTDR" (OPTICAL TIME-DOMAIN REFLECTOMETER) TEST ON ALL FIBERS WITH THE TRAFFIC SIGNAL TECHNICIAN PRESENT BEFORE FINAL ACCEPTANCE. OPERATOR SHALL BE QUALIFIED TO PERFORM TEST. WRITTEN TEST RESULTS SHALL BE PROVIDED TO TECHNICIAN AS TO RESULTS OF EACH FIBER TESTED.

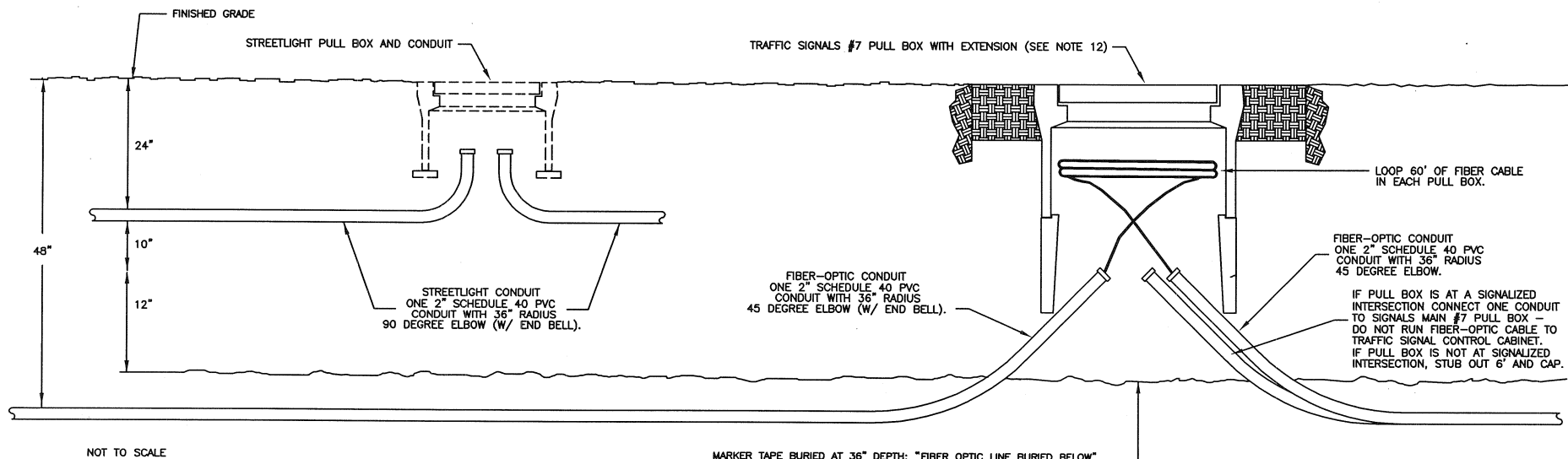
12. PULL BOX LID SHALL BE #7 CHRISTY "FIBRELYTE" (PART NUMBER FL36T) OR APPROVED EQUAL.

13. FIBER OPTIC CABLE:

APPROVED SUPPLIER: OPTICAL CABLE CORPORATION (OCC)
 PART NUMBER: GX12-1450-6W3SB/IUC-6SYMC/YMD-900-R WITH #28 AWG TRACKER WIRE
 DESCRIPTION: DISTRIBUTION BREAKOUT FIBER OPTIC CABLE TYPE OFNR "ULTRA-FOX (TM)."
 FIBER: 6 STRANDS MULTI-MODE AND 6 STRANDS SINGLE MODE
 JACKET: CORE-LOCKED (TM) INDOOR/OUTDOOR PVC
 TRACKER WIRE: AWG #28

SUPPLIERS AND/OR PART NUMBERS OTHER THAN THOSE NOTED ABOVE MUST BE PRE-APPROVED BY THE TOWN OF GILBERT TRAFFIC SIGNAL TECHNICIAN.

14. CONDUIT INSTALLED FOR FUTURE USE SHALL HAVE AN 18 AWG LOCATOR WIRE INSTALLED IN A CONTINUOUS RUN



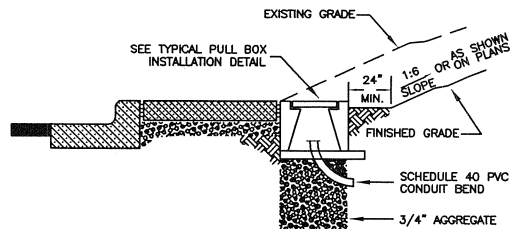
DETAIL NO.
94

TOWN OF GILBERT
STANDARD DETAIL

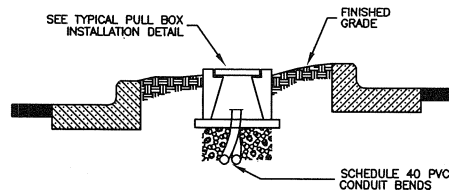
TRAFFIC SIGNAL INTERCONNECT

2/1/99 (REV. 6/1/99)

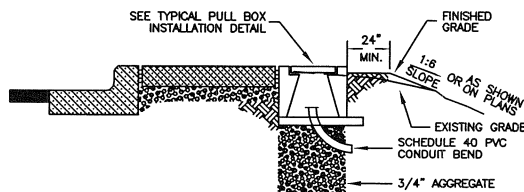
DETAIL NO.
94



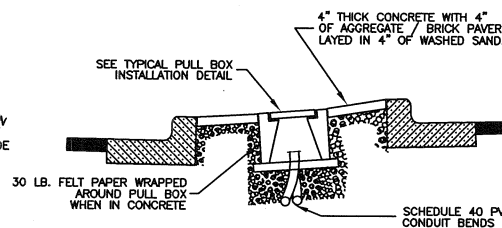
UPWARD SLOPE DETAIL



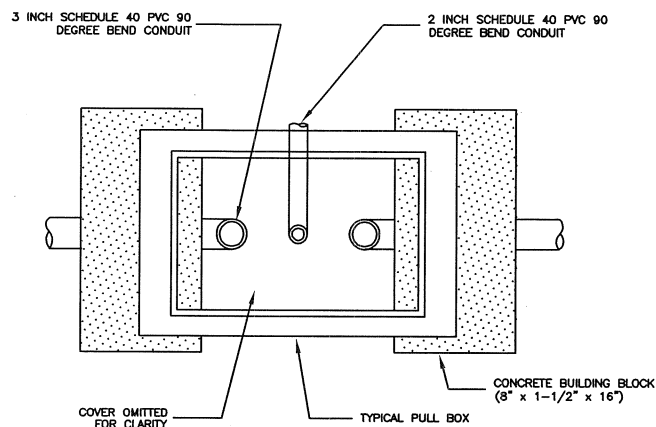
MEDIAN DETAIL



DOWNWARD SLOPE DETAIL



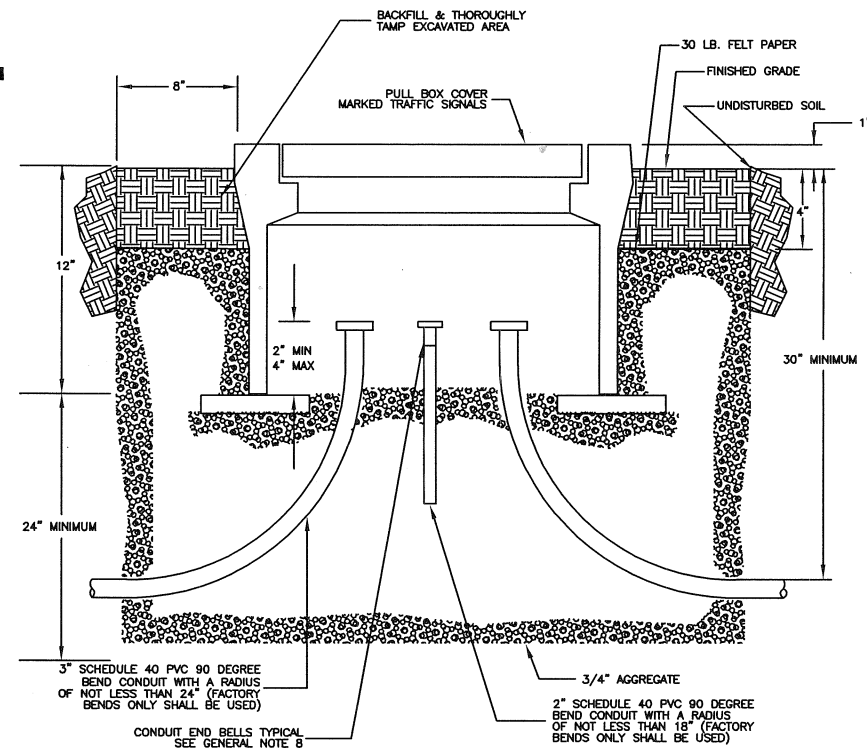
CONCRETE MEDIAN DETAIL



TOP VIEW

GENERAL NOTES:

1. ALL FINISHED TRAFFIC SIGNAL EQUIPMENT (POLE FOUNDATIONS, PULL BOXES, AND CONTROLLER CABINET PADS) SHALL BE AT BACK OF SIDEWALK GRADE, UNLESS OTHERWISE NOTED ON PLANS.
2. WHEN TRAFFIC SIGNAL EQUIPMENT (POLES, PULL BOXES, AND CONTROLLER CABINETS) ARE INSTALLED IN AN UPWARD SLOPE SECTION, THE PROJECT ENGINEER SHALL DESIGN A RETAINING WALL OR CUT BACK EXISTING GRADE TO OBTAIN A LEVEL AREA FOR AT LEAST 24 INCHES FROM THE TRAFFIC SIGNAL EQUIPMENT. THE SLOPE OF THE FINISHED GRADE SHALL NOT EXCEED A 1:6 SLOPE AND SHALL MATCH AND CONFORM TO THE EXISTING TERRAIN.
3. WHEN TRAFFIC SIGNAL EQUIPMENT (POLES, PULL BOXES, AND CABINETS) ARE INSTALLED IN A DOWNWARD SLOPE SECTION, NEEDED DIRT SHALL BE HAULED IN TO OBTAIN A LEVEL AREA FOR AT LEAST 24 INCHES FROM THE TRAFFIC SIGNAL EQUIPMENT. THE SLOPE OF THE FINISHED GRADE SHALL NOT EXCEED A 1:6 SLOPE AND SHALL MATCH AND CONFORM TO THE EXISTING TERRAIN.
4. CONDUIT END BELLS SHALL BE INSTALLED BEFORE PULLING WIRE.
5. BACKFILL WITH EXCAVATED MATERIALS AND THOROUGHLY TAMP PER M.A.C. STANDARD 601.
6. FINISH GRADE SHALL BE 1" DOWN FROM TOP OF BOX. ANY PAVEMENT OR SIDEWALK SHALL BE FLUSH WITH TOP OF BOX.



TYPICAL PULL BOX INSTALLATION

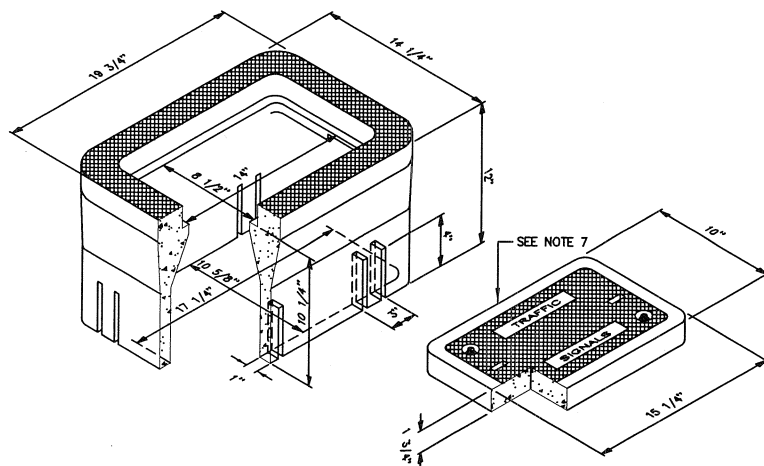
DETAIL NO.
95

TOWN OF GILBERT
STANDARD DETAIL

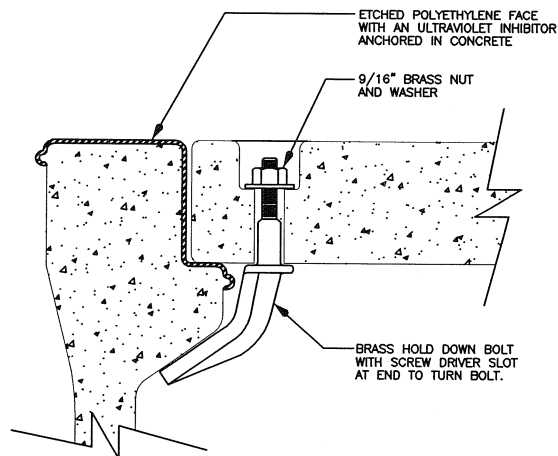
TRAFFIC SIGNAL PULLBOX
INSTALLATION

2/1/99

DETAIL NO.
95



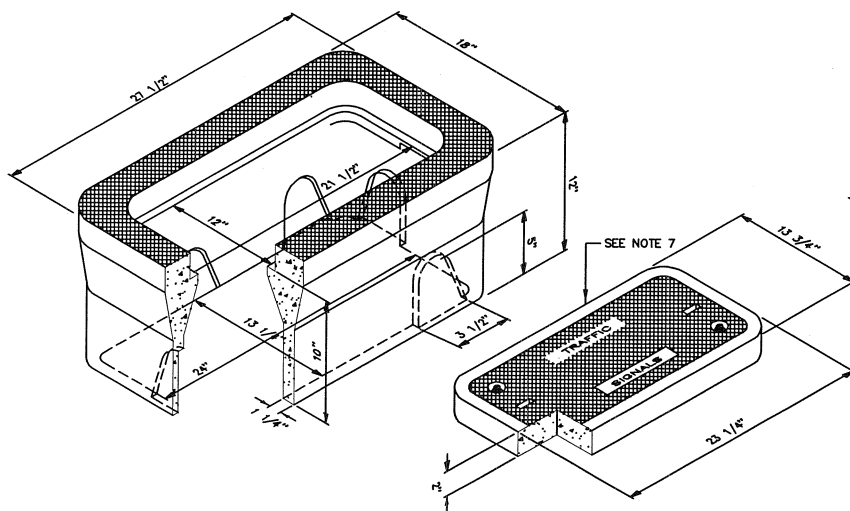
TRAFFIC SIGNAL NUMBER 3 1/2
(PULL BOX PART NUMBER N-9, LID PART NUMBER FL9T)



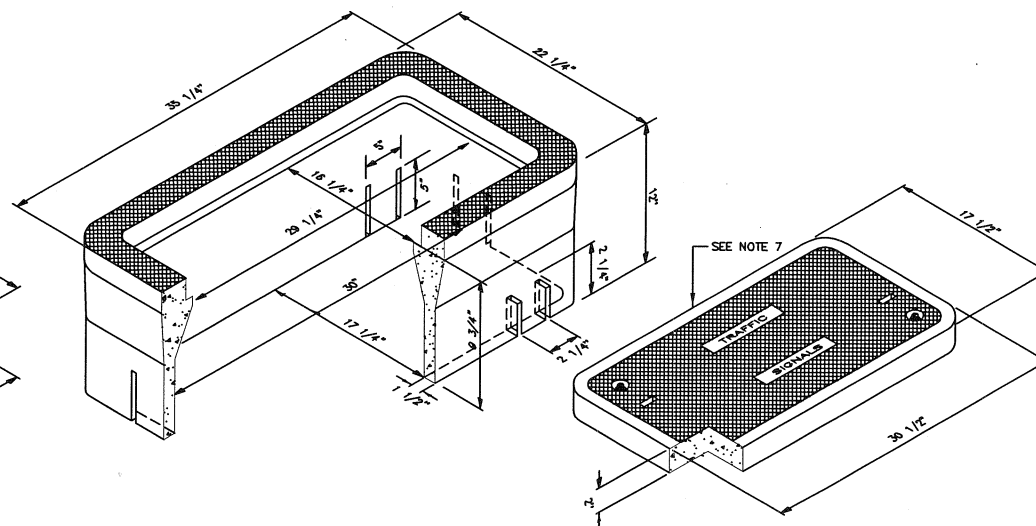
HOLD DOWN BOLT DETAIL

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. ALL BOXES SHALL BE MADE OF A HIGH DENSITY REINFORCED CONCRETE MATERIAL WITH END AND SIDE KNOCKOUTS, AND NON-SETTLING SHOULDERS TO MAINTAIN GRADE. ALL BOXES SHALL BE MANUFACTURED WITH APPROXIMATE DIMENSIONS AS SHOWN.
3. ALL BOXES SHALL HAVE AN ETCHED POLYETHYLENE FACE WITH AN ULTRAVIOLET INHIBITOR ANCHORED IN CONCRETE.
4. ALL BOXES SHALL BE CHRISTY OR APPROVED EQUAL.
5. COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS "TRAFFIC SIGNALS".
6. REFER TO T.O.G. DETAIL 95 FOR PROPER INSTALLATION.
7. ALL BOXES SHALL BE CHRISTY "FIBRELYTE" OR APPROVED EQUAL. CONCRETE LIDS SHALL NOT BE USED.



TRAFFIC SIGNAL NUMBER 5 1/2
(PULL BOX PART NUMBER N-30, LID PART NUMBER FL30T)



TRAFFIC SIGNAL NUMBER 7 (N-36)
(PULL BOX PART NUMBER N-36, LID PART NUMBER FL36T)

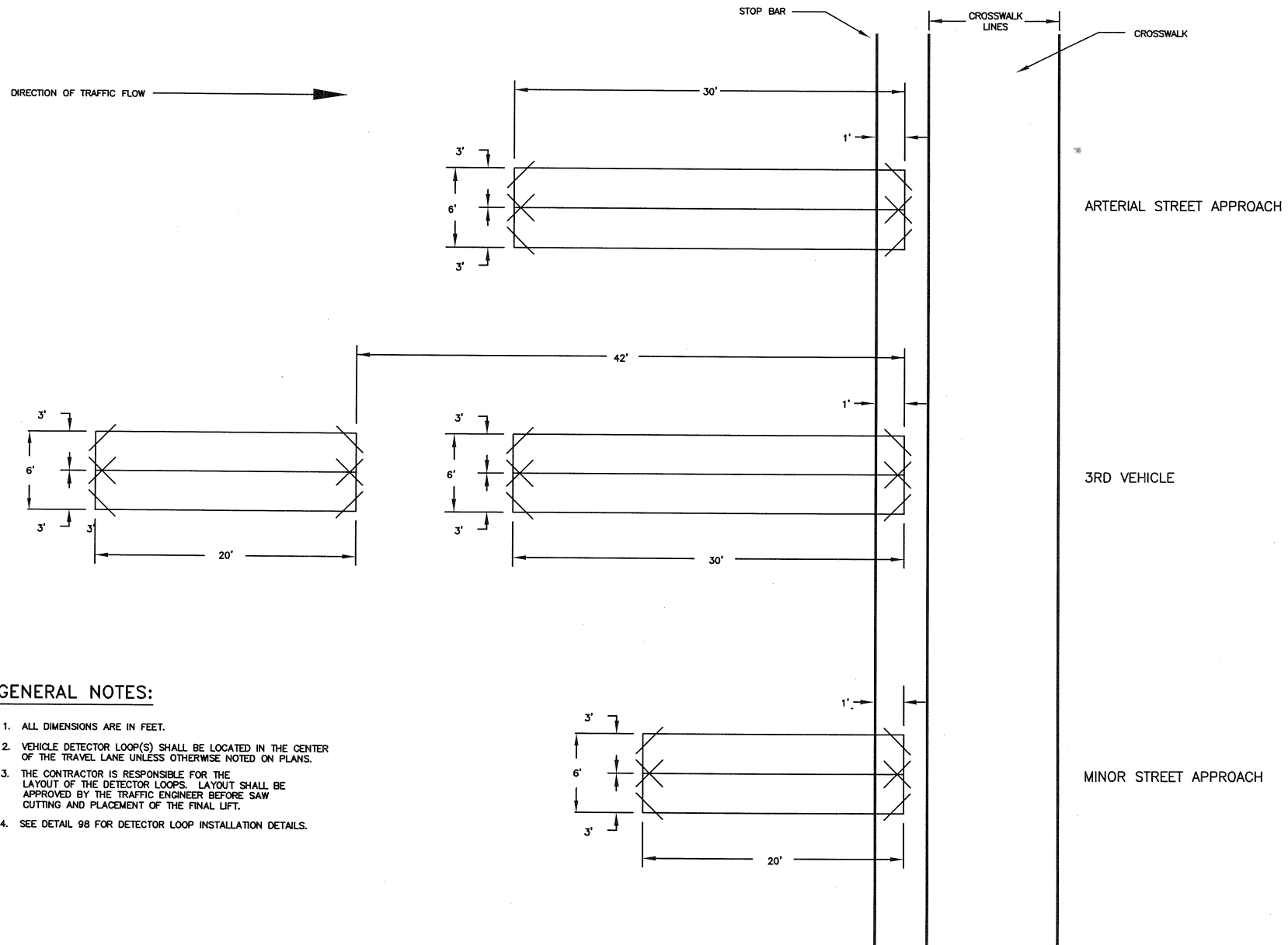
DETAIL NO.
96

TOWN OF GILBERT
STANDARD DETAIL

TRAFFIC SIGNAL PULLBOX

2/1/99

DETAIL NO.
96



GENERAL NOTES:

1. ALL DIMENSIONS ARE IN FEET.
2. VEHICLE DETECTOR LOOP(S) SHALL BE LOCATED IN THE CENTER OF THE TRAVEL LANE UNLESS OTHERWISE NOTED ON PLANS.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF THE DETECTOR LOOPS. LAYOUT SHALL BE APPROVED BY THE TRAFFIC ENGINEER BEFORE SAW CUTTING AND PLACEMENT OF THE FINAL LIFT.
4. SEE DETAIL 98 FOR DETECTOR LOOP INSTALLATION DETAILS.

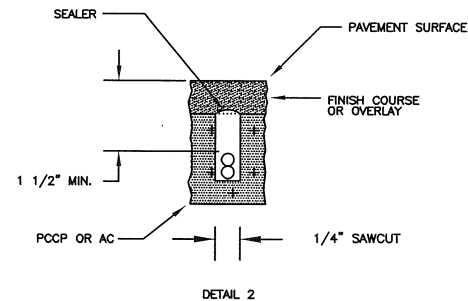
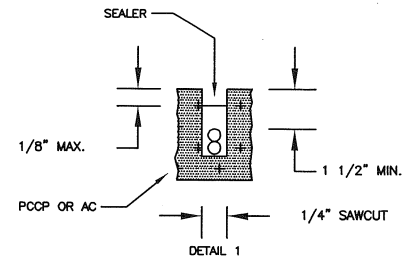
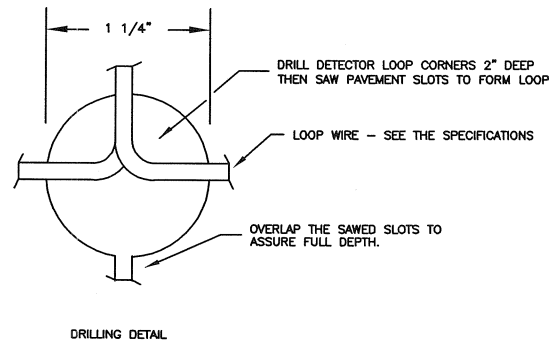
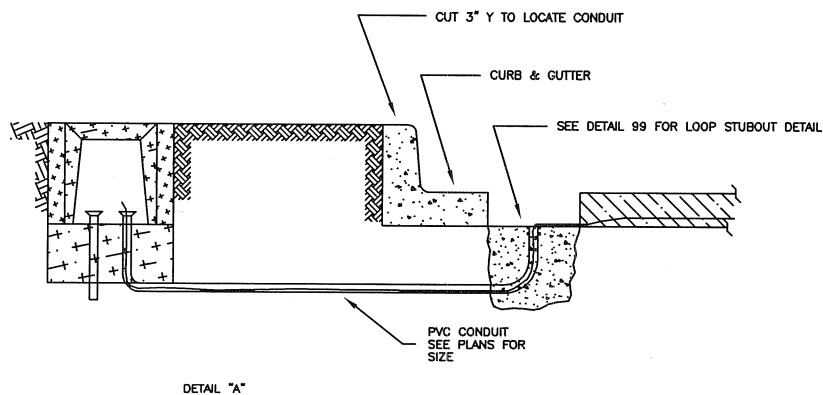
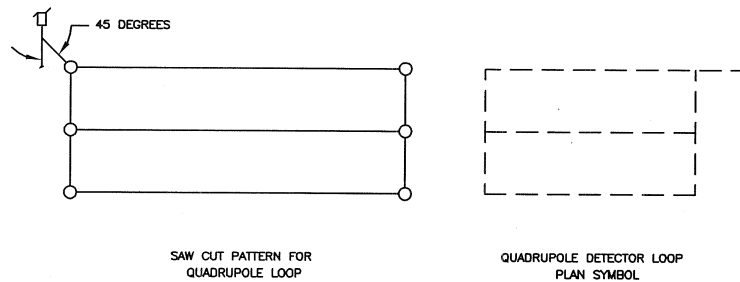
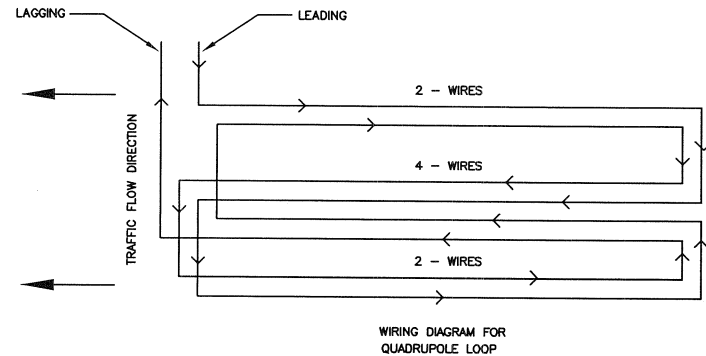
DETAIL NO.
97

TOWN OF GILBERT
STANDARD DETAIL

DETECTOR LOOP LAYOUT

2/1/99

DETAIL NO.
97



GENERAL NOTES:

- ALL DIMENSIONS ARE IN INCHES.
- ALL DETECTOR LOOPS SHALL BE INSTALLED AS SHOWN ON THE PROJECT PLANS, TOWN OF GILBERT STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER.
- ANY DETECTOR LOOP THAT DOES NOT MEET THE ADOT FIELD TEST REQUIREMENT (ADOT 735-3.01 (E)), OR CANNOT BE TUNED TO THE ENGINEER'S SATISFACTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY.
- ON ALL PROJECTS WHERE NEW PAVEMENT IS TO BE INSTALLED, THE DETECTOR LOOPS SHALL BE INSTALLED IN THE BASE COURSE.
- ALL SAW CUTS REQUIRE 1 1/2" COVER MINIMUM.
- TOWN OF GILBERT WILL ACCEPT EITHER CORE DRILL OR 45 DEGREE SAW CUT CORNERS.
- BLOW OUT ALL SAW CUTS BEFORE INSTALLING THE LOOP WIRE. AFTER BLOWING OUT SAW CUTS, CLEAN SILT FROM ROADWAY SURFACE SO THAT NO LAYER OF DEBRIS EXISTS AND ALL PAINTED LANE LINES ARE CLEARLY VISIBLE.
- ALL DETECTOR LOOPS SHALL BE GIVEN A CONTINUITY AND INSULATION TEST BY THE CONTRACTOR BEFORE AND AFTER PLACING THE FINAL PAVING OR PLACING THE SEALER IN THE SAW CUTS.
- LOOP WIRE USED IN THE ROADWAY DETECTION SHALL BE IMSA SPECIFICATION #51-5-1984. THE ENCASED TUBE COLOR SHALL BE ORANGE.
- NUMBER OF LOOP TURNS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
- SAWCUTS SHALL BE SEALED (FILLED) WITH W.R. MEADOWS LOOP SEALANT, 3M LOOP SEALANT, OR HOT APPLIED RUBBERIZED SEALANT, TO 1/8" BELOW PAVEMENT SURFACE.
- ALL LEAD-IN CABLE IS TO BE PLACED IN CONDUIT (LOOP STUB OUTS) TO CROSS UNDER CURB AND GUTTER TO PULL BOX. CONDUIT IS TO BE 2" SCHEDULE 40 PVC.
- ALL LOOP WIRE SHALL BE TWISTED AT THE RATE OF TWO TURNS PER FOOT FROM THE CORNER OF THE LOOP INTO THE PULL BOX.
- LOOP STUB OUT HOLE AT GUTTER UP IS TO BE FILLED AS SHOWN ON DETAIL 99.
- THE LEADING WIRE FOR EACH LOOP SHALL BE TAGGED WITH WHITE TAPE TO DIFFERENTIATE BETWEEN THE LEADING AND LAGGING END OF THE WIRE.
- WHEN HOOKING UP MULTIPLE LOOPS TO THE SAME PHASE, THE LEADING WIRE FROM ONE LOOP SHALL BE CONNECTED TO THE NEXT LANE'S LAGGING WIRE.
- WHEN MORE THAN ONE LOOP IS INSTALLED IN THE SAME DIRECTION, LEAD IN WIRES SHALL BE IDENTIFIED IN THE PULL BOX AS FOLLOWS:
 - 1 BLACK TAPE = CURB LANE
 - 2 BLACK TAPES = MIDDLE LANE(S)
 - 3 BLACK TAPES = LEFT TURN LANE
- PROTECTED/PERMITTED LEFT TURN LOOP LEAD-INS SHALL BE IDENTIFIED IN THE PULL BOX AS FOLLOWS:
 - 1 WHITE TAPE = FRONT 6' x 30' LOOP
 - 2 WHITE TAPES = BACK 6' x 20' LOOP
- DETAIL 1 SHOWS INSTALLATION IN EXISTING PAVEMENT AND DETAIL 2 SHOWS INSTALLATION IN BASE COURSE.
- WITHIN 3 DAYS OF COMPLETION OF DETECTOR LOOP INSTALLATION, SCHEDULE FINAL FIELD TEST. UPON PASSING FINAL FIELD TEST, DETECTOR LOOPS SHALL BE CONNECTED AND MADE TO OPERATE.

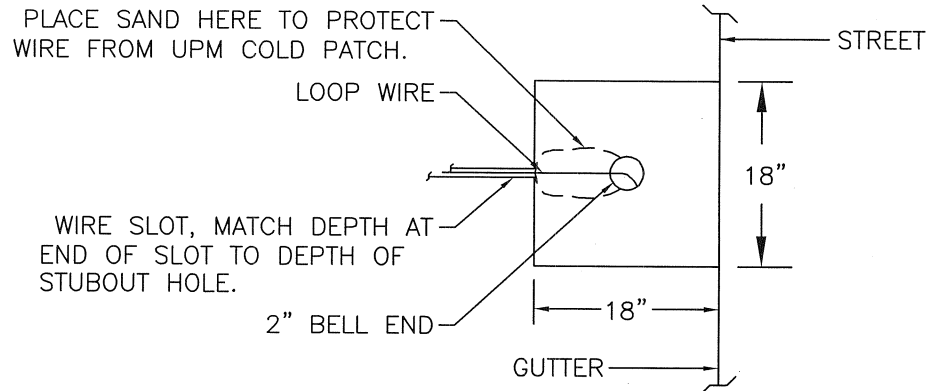
DETAIL NO.
98

TOWN OF GILBERT
STANDARD DETAIL

DETECTOR LOOP INSTALLATION

2/1/99

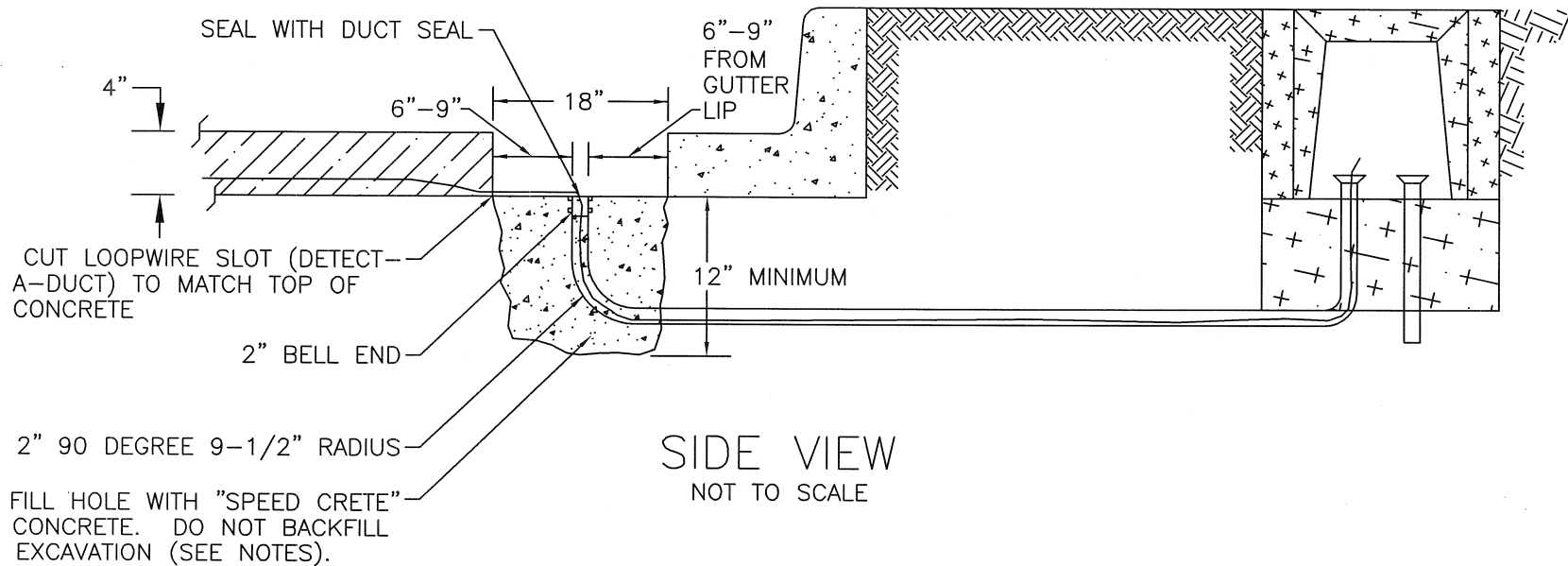
DETAIL NO.
98



TOP VIEW
NOT TO SCALE

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. CONDUIT END SHALL BE SEALED WITH DUCT SEAL.
3. COVER EXPOSED WIRE WITH JUST ENOUGH SAND TO PROTECT FROM UPM COLD PATCH.
4. UPM COLD PATCH SHALL BE COMPACTED IN TWO LIFTS WITH A MACHINE PLATE TAMPER. LEAVE UPM 1/4" PROUD OF ROADWAY SURFACE.
5. EXCAVATION SHALL BE FILLED WITH "SPEED CRETE." NO OTHER BACKFILL MATERIAL SHALL BE USED.



SIDE VIEW
NOT TO SCALE

DETAIL NO.
99

TOWN OF GILBERT
STANDARD DETAIL

DETECTOR LOOP STUB OUT

2/1/99

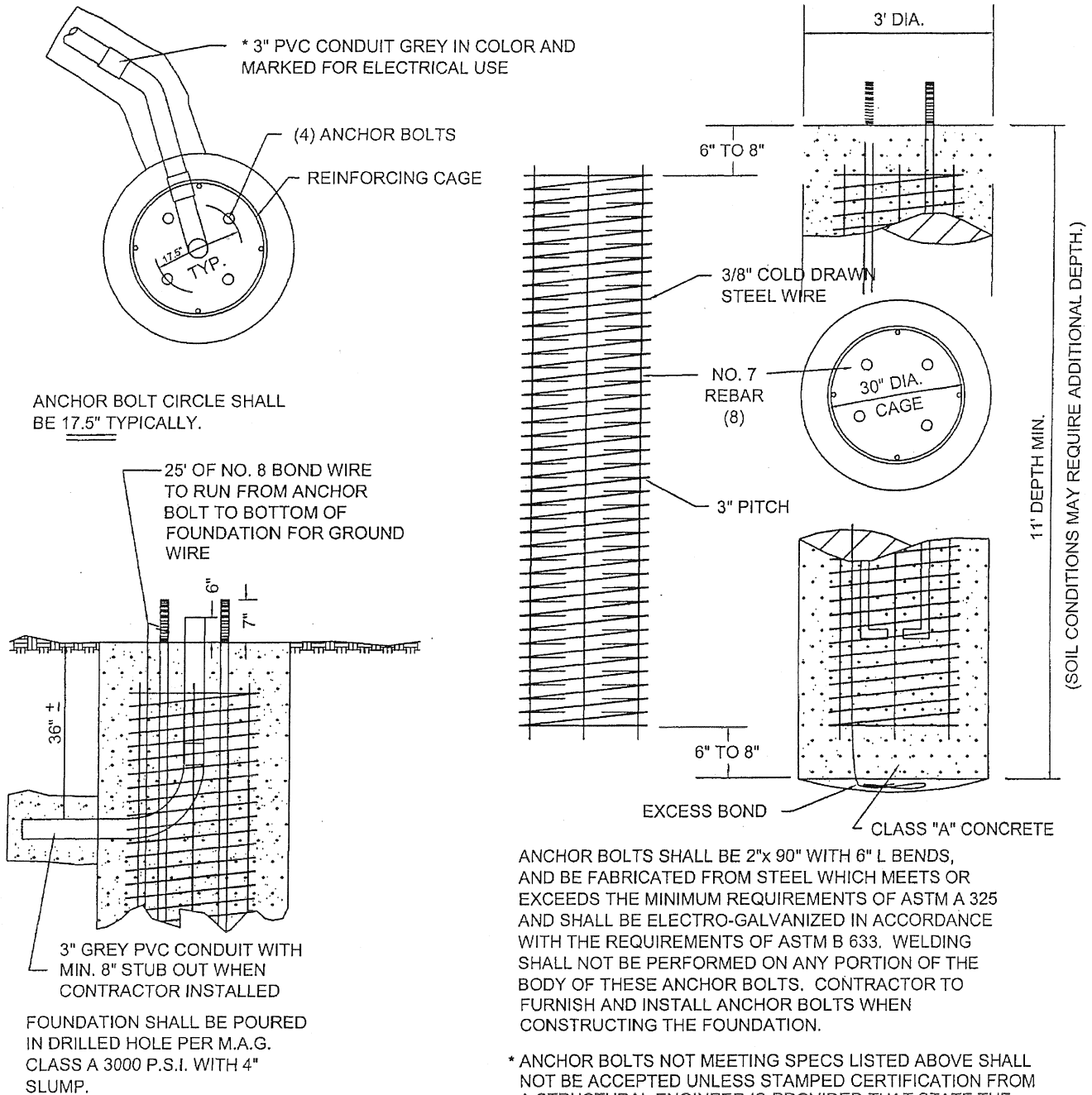
DETAIL NO.
99

STANDARD DETAIL G-412

CITY OF GLENDALE
TRANSPORTATION



SIGNAL EQUIPMENT ANCHOR BASE DETAIL



ANCHOR BOLTS SHALL BE 2"x 90" WITH 6" L BENDS, AND BE FABRICATED FROM STEEL WHICH MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM A 325 AND SHALL BE ELECTRO-GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM B 633. WELDING SHALL NOT BE PERFORMED ON ANY PORTION OF THE BODY OF THESE ANCHOR BOLTS. CONTRACTOR TO FURNISH AND INSTALL ANCHOR BOLTS WHEN CONSTRUCTING THE FOUNDATION.

* ANCHOR BOLTS NOT MEETING SPECS LISTED ABOVE SHALL NOT BE ACCEPTED UNLESS STAMPED CERTIFICATION FROM A STRUCTURAL ENGINEER IS PROVIDED THAT STATE THE ANCHOR BOLTS MEET OR EXCEED THE REQUIREMENTS LISTED ABOVE.

* ALL CONDUIT SHALL BE SCHEDULE 40 P.V.C. GREY IN COLOR AND MARKED FOR ELECTRICAL USE.

APPROVED BY:

James H. Book
TRANSPORTATION DIRECTOR

6-27-02
DATE

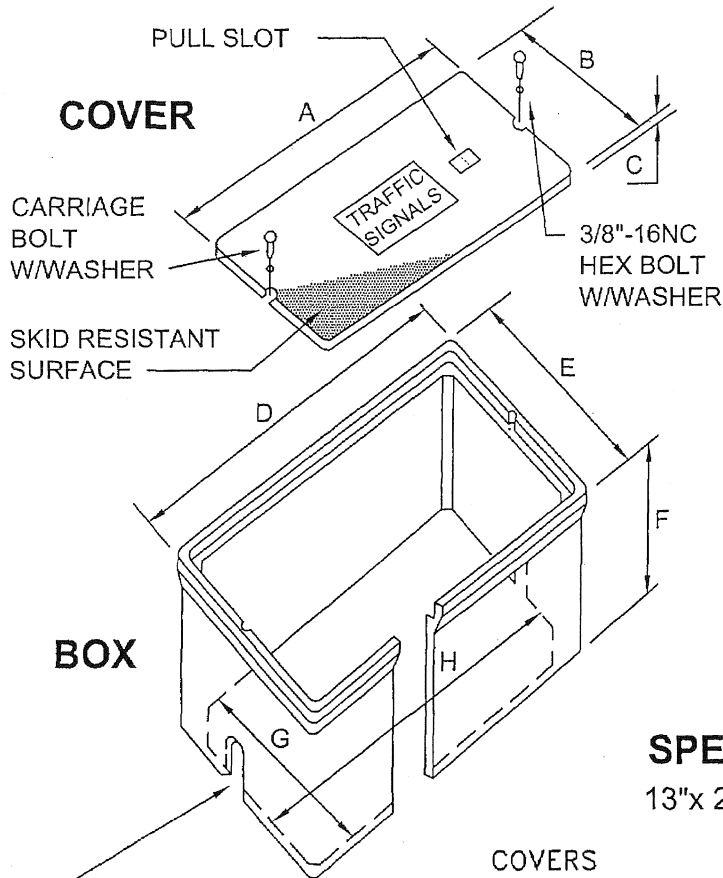
REVISED: JUNE 2002

STANDARD DETAIL G-415

CITY OF GLENDALE
TRANSPORTATION



SIGNAL EQUIPMENT TYPE 5 PULL BOX



*** FOR APPROVED PULL BOX TYPES SEE DETAIL IN COG TRAFFIC "SIGNAL STANDARDS" T1-5 & T1-3.**

FOR PULL BOX EXTENSIONS BOX'S MAY BE STACKED

SPECIFICATIONS/DATA

13"x 24" PC STYLE ASSEMBLIES

COVERS

DESCRIPTION	PART NO.	DIMENSIONS (IN.)			WT. LBS.
		A	B	C	
LOCKING COVER	PC1324CA	25 1/4	14 1/4	3/4	22

BOXES * (STACKABLE)

DESCRIPTION	PART NO.	DIMENSIONS (IN.)							WT. LBS.
		D	E	F	G	H	J	K	
BOX W/(2) MOUSEHOLES	PC1324BB	27 1/4	16 1/4	12	12 3/4	23 3/4	1/2	11 1/4	45

* BOXES AND COVERS SHALL BE "QUAZITE COMPOSOLITE" OR "CDR SYSTEMS"

APPROVED BY:

TRANSPORTATION DIRECTOR

6-23-02
DATE

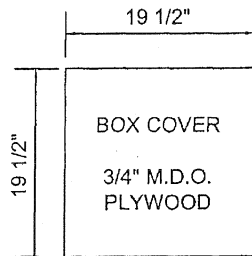
REVISED: JUNE 2002

STANDARD DETAIL G-416

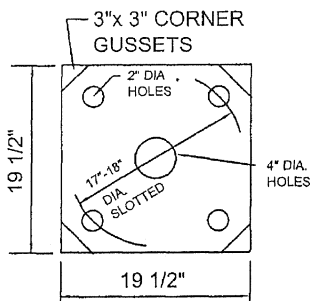
CITY OF GLENDALE
TRANSPORTATION



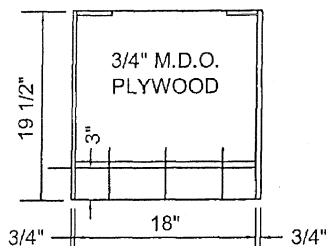
GUARD BOX FOR SIGNAL POLE BASE



TOP VIEW

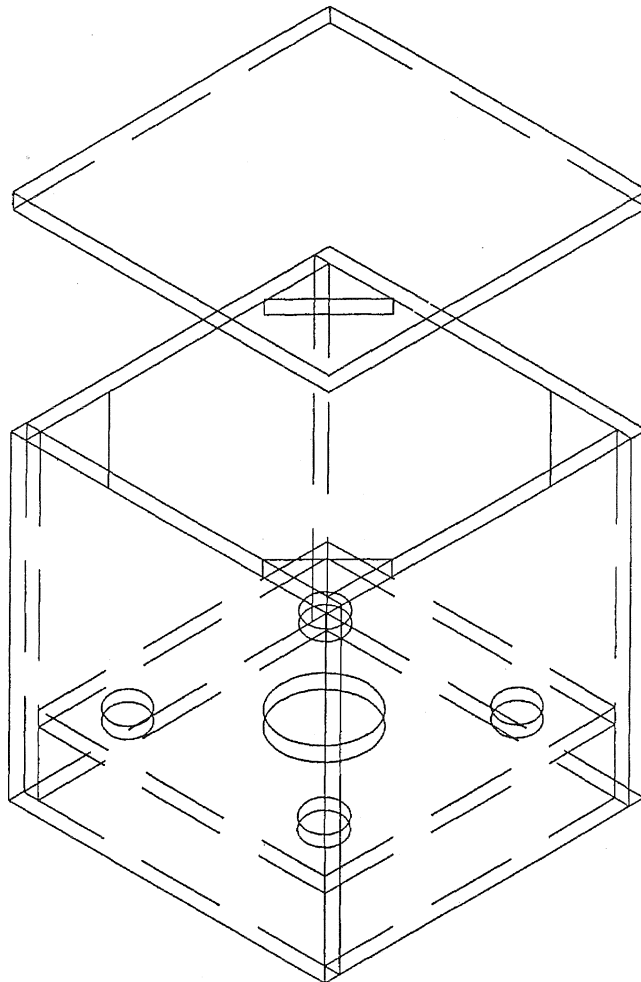


TOP VIEW



SIDE VIEW

(VERTICAL SECTION)



NOTE

BOX TO BE CONSTRUCTED OF RESIN IMPREGNATED 3/4" THICK MEDIUM DENSITY OVERLAY PLYWOOD GOOD ON ONE SIDE. ALL JOINTS WITH EXCEPTION OF LID, SHALL BE ASSEMBLED WITH RESIN BASE WOOD GLUE AND VINYL COATED BOX NAILS. LID SHALL BE FASTENED IN PLACE BY BOX NAILS ONLY, AFTER BOX HAS BEEN INSTALLED. FINISH SHALL CONSIST OF GREEN EXTERIOR GRADE ENAMEL. PAINT APPLIED TO BOTH INSIDE AND OUTSIDE OF BOX AND LID.

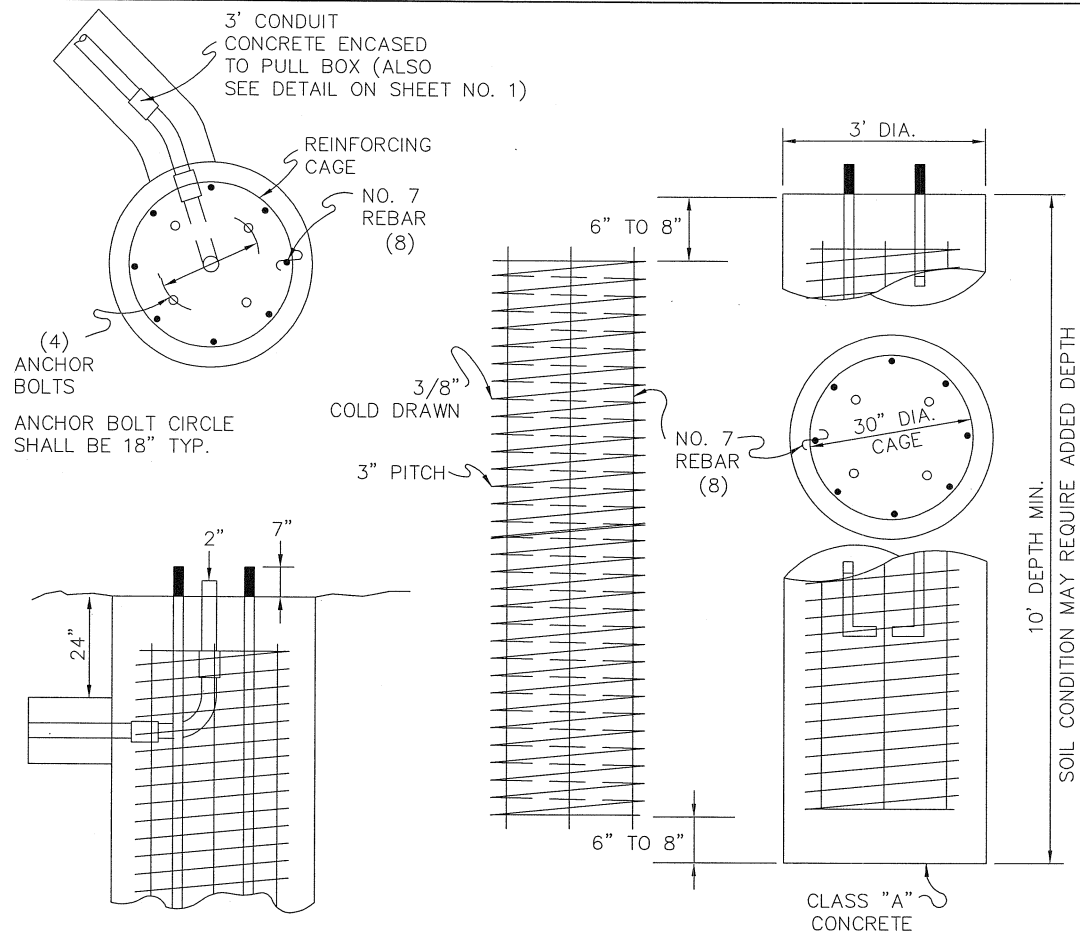
APPROVED BY:

James C. Book
TRANSPORTATION DIRECTOR

6-27-02
DATE

REVISED: JUNE 2002

DEVELOPER



FOUNDATION SHALL BE POURED IN
DRILLED HOLE PER A.D.O.T. STD.
DRW. NO. T.S. 4-10,11,12, OR 13.

ANCHOR BOLTS & CONDUIT
WILL REQUIRE INTERIM PROTECTION
AFTER BEING INSTALLED. SEE
STD. DETAIL G-129

ANCHOR BOLTS SHALL BE GALVANIZED
2'x 90" WITH L BENDS AND BE
PROVIDED WITH (2) HEX NUTS AND
(2) WASHERS EACH.

ADOT REFERENCE T.S. 4-10

DETAIL NO.
G-3260

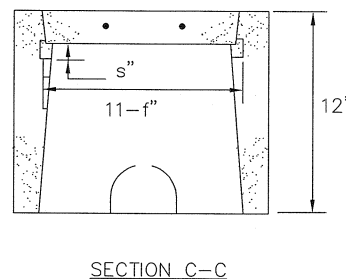
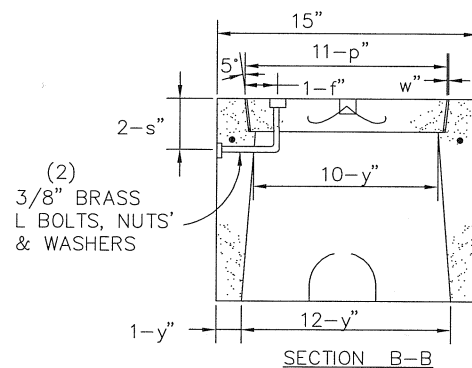
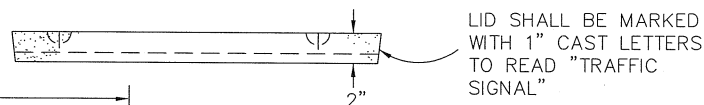
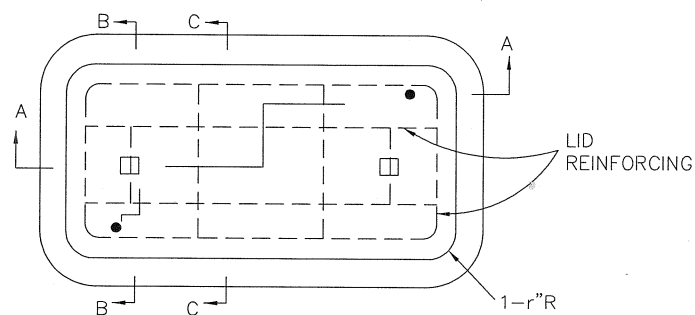
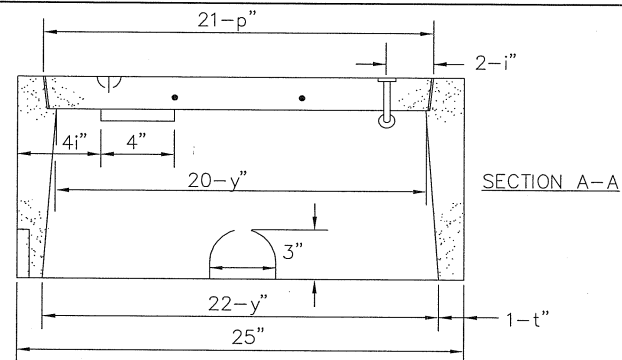
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

SIGNAL POLE STANDARD
ANCHOR BASE DETAIL

DETAIL NO.
G-3260

ALSO REFER TO A.D.O.T.
STD. DRAWING T.S.1-2



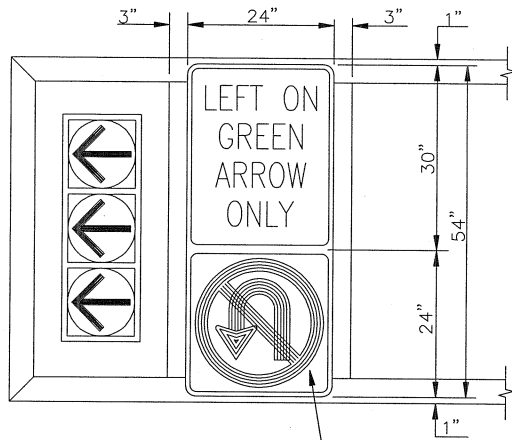
DETAIL NO.
G-3261

CITY OF GOODYEAR
STANDARD DETAIL

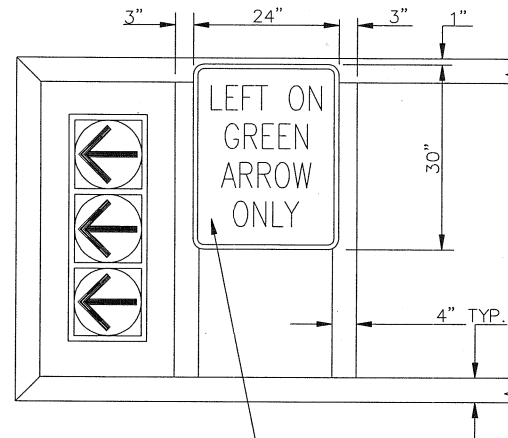
APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

SIGNAL EQUIPMENT STANDARD
TYPE 5 PULL BOX

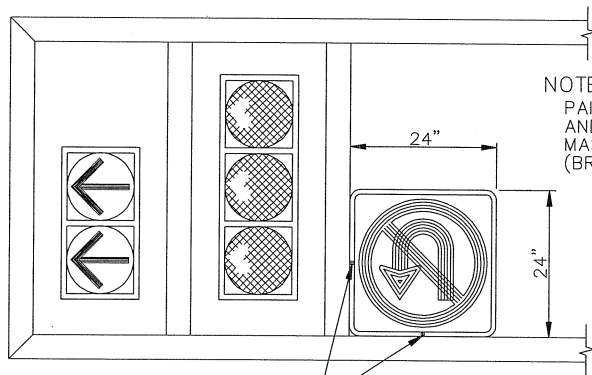
DETAIL NO.
G-3261



MOUNT DUAL SIGN ON SINGLE UNIT, CENTER OVER BLANK PANEL ON SIGNAL MAST ARM



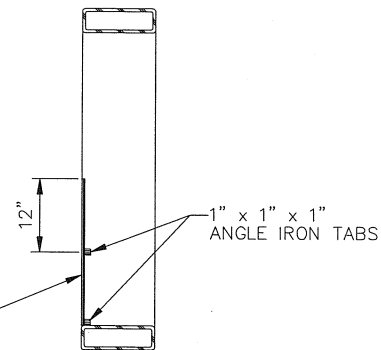
MOUNT SINGLE SIGN, CENTER OVER BLANK PANEL ON SIGNAL MAST ARM



NOTE:
PAINT BACK SIDES OF SIGN
AND ANGLE IRON TO MATCH
MAST ARM COLOR.
(BRONZE)

1" x 1" x 1" ANGLE IRON TABS WELDED TO MAST
ARM FOR SIGN MOUNTING. (SIGN FACE TO BE
FLUSH WITH APPROACH SIDE OF MAST ARM)

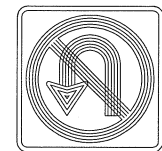
SIGN FACE



SECTION



R10-5z



R3-4

DETAIL NO.
G-3265

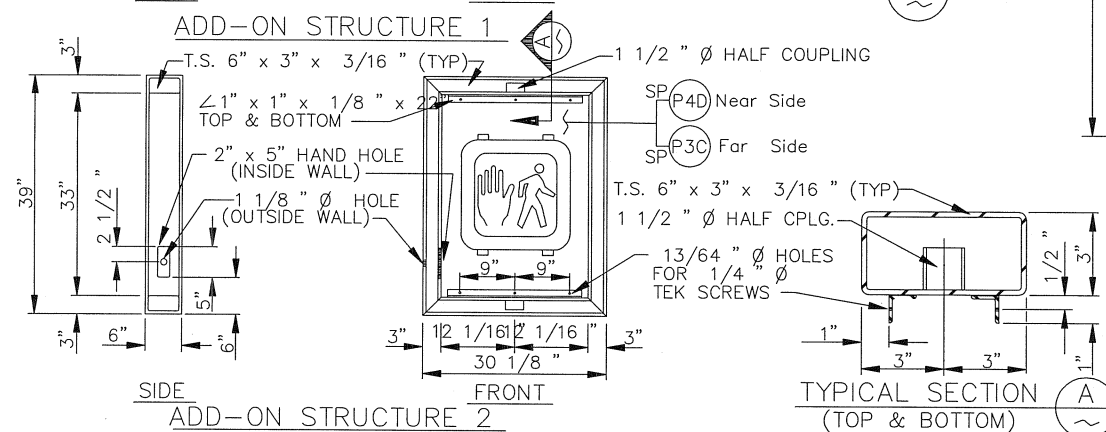
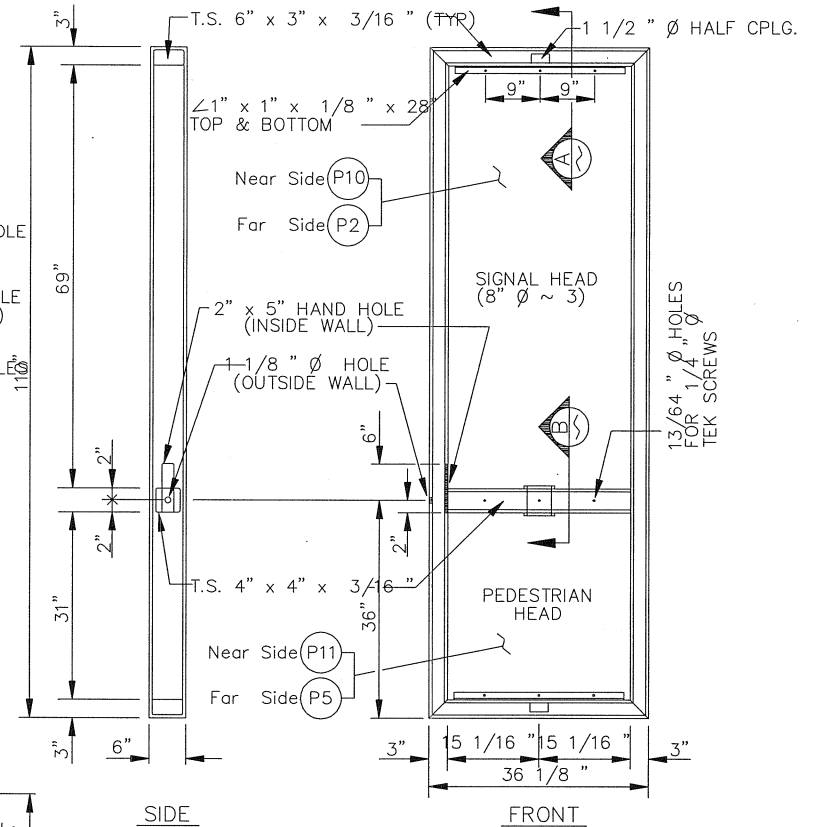
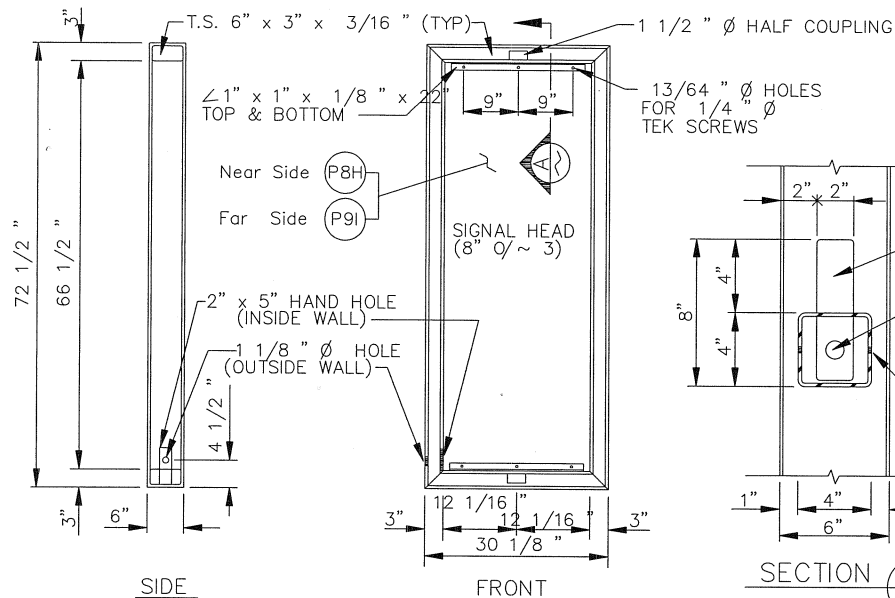
CITY OF GOODYEAR
STANDARD DETAIL

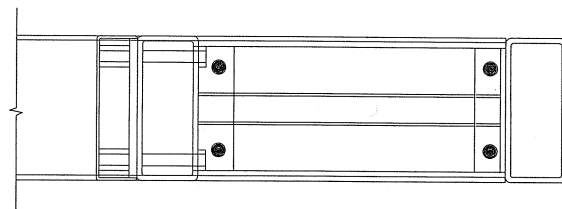
APPROVED BY:
Goodyear Standards and
Policies Committee

7/97

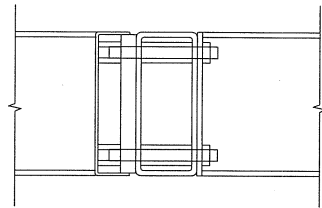
MODULAR SIGNAL MAST ARM SIGN MOUNTING STANDARDS

DETAIL NO.
G-3265

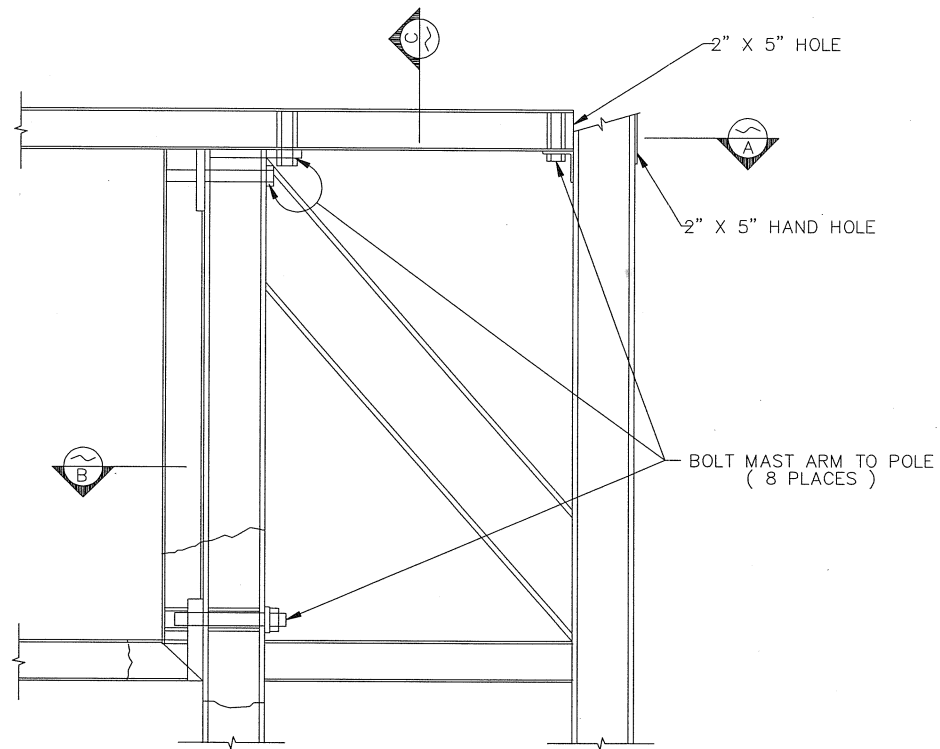




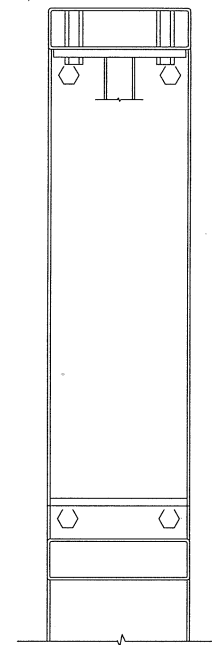
SECTION A



SECTION B



MAST ARM CONNECTION DETAIL



SECTION C

DETAIL NO.
G-3267

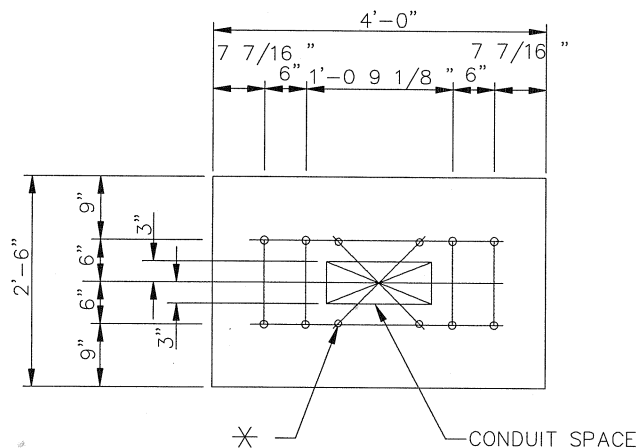
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

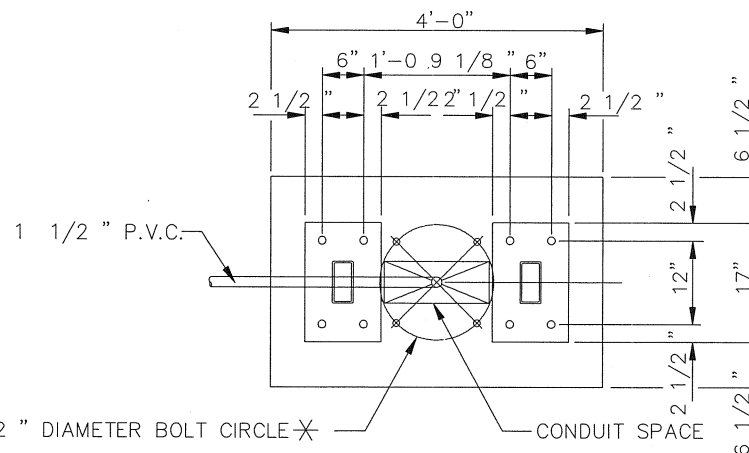
7/97

MODULAR POLE MAST ARM CONNECTION

DETAIL NO.
G-3267



ANCHOR BOLT LAYOUT PLAN



BASE PLATE LAYOUT PLAN

GENERAL NOTES

1. CONCRETE 4000 P.S.I. @ 28 DAYS
2. REBAR GRADE 60
3. ANCHOR BOLTS A-36 FULLY GALVANIZED
4. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
5. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.
6. ADDITIONAL 1 1/2" P.V.C. CONDUIT MAY BE REQUIRED FOR LOOPS, SEE SIGNAL PLAN.

✱ BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

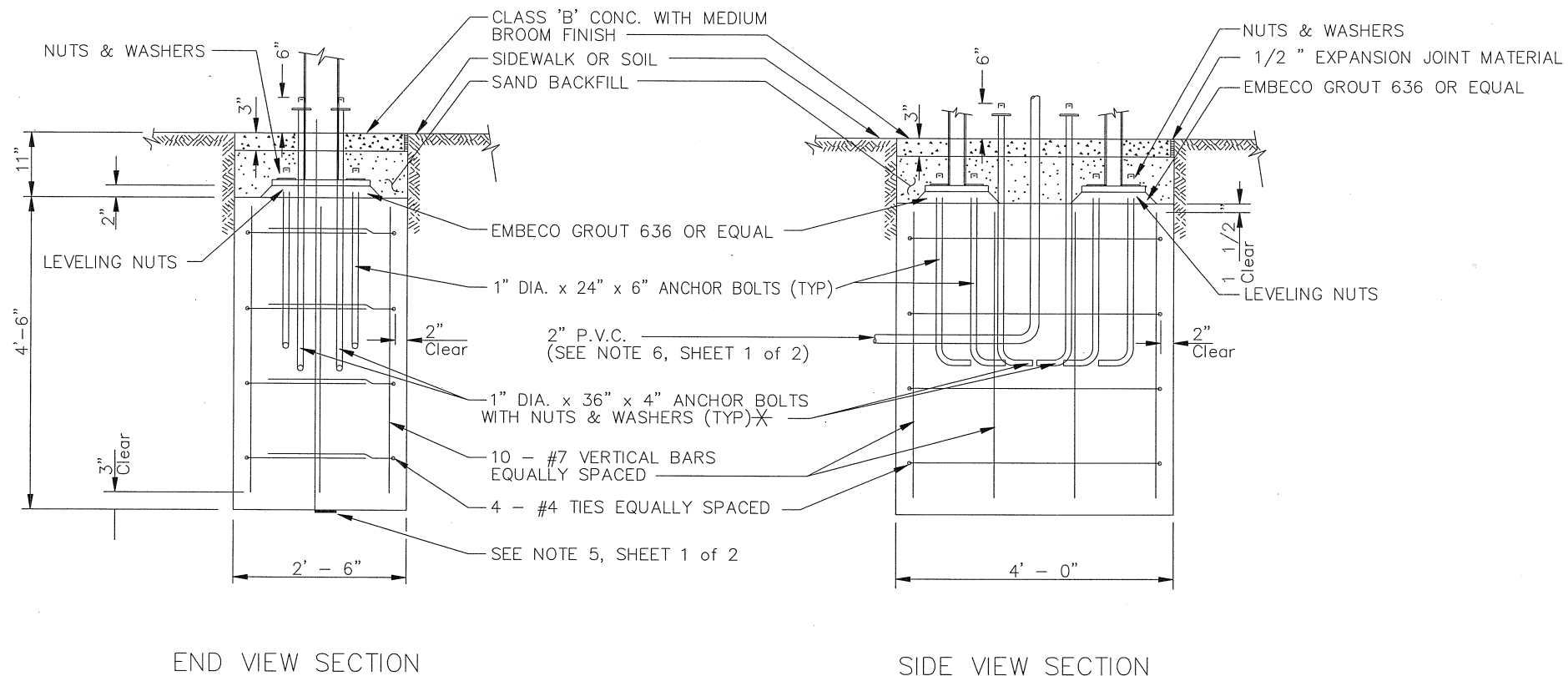
DETAIL NO.
G-3270-1

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

TRAFFIC SIGNAL FOUNDATION DETAIL
FOUNDATION FOR TYPE "A" MODULAR (NO MAST ARM)

DETAIL NO.
G-3270-1



DETAIL NO.
G-3270-2

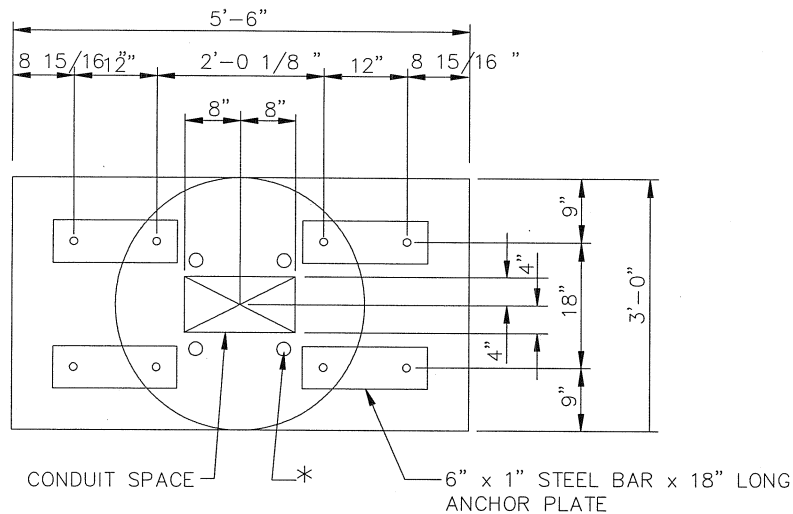
CITY OF GOODYEAR
STANDARD DETAIL

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Goodyear Standards and
Policies Committee

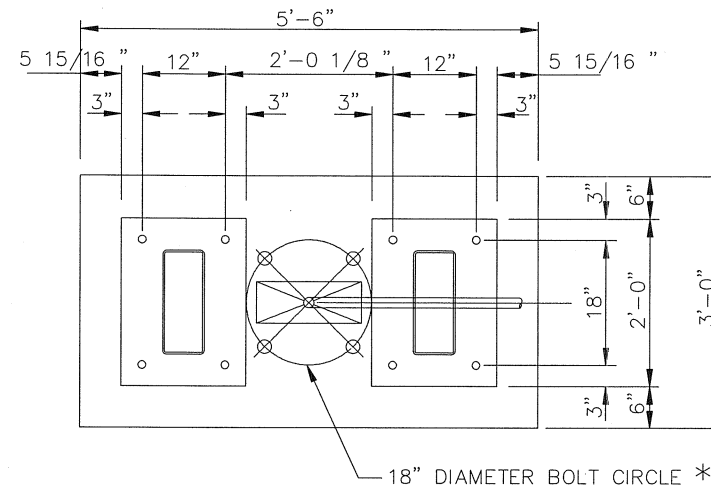
7/97

TRAFFIC SIGNAL FOUNDATION DETAIL
FOUNDATION FOR TYPE "A" MODULAR (NO MAST ARM)

DETAIL NO.
G-3270-2



ANCHOR BOLT LAYOUT PLAN



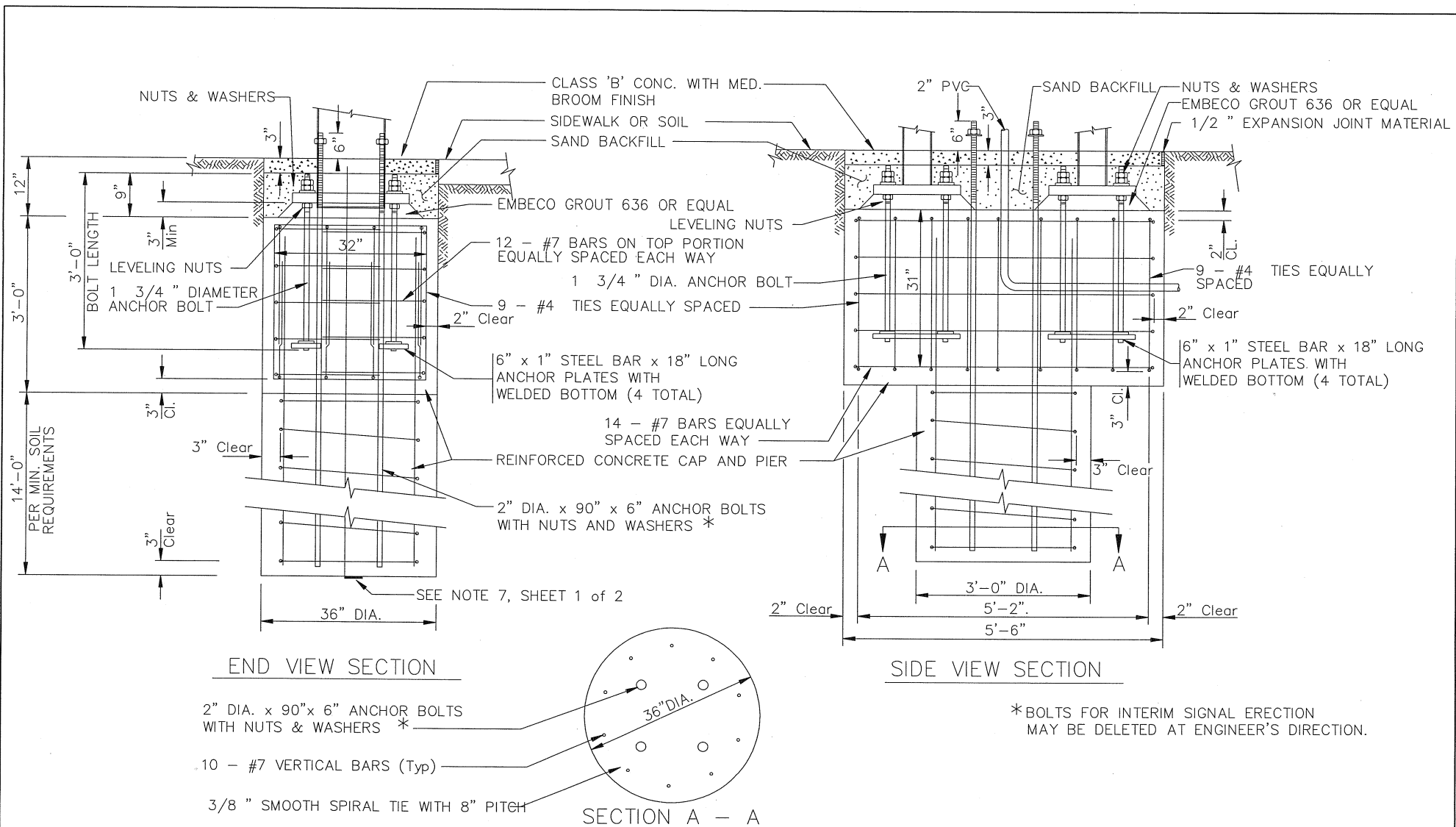
BASE PLATE LAYOUT PLAN

GENERAL NOTES

1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS, SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/ SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. AT 28 DAYS.
4. REBAR GRADE 60.
5. EMBEDDED PLATES - A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED.
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

*BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

DETAIL NO. G-3271-1	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	TRAFFIC SIGNAL FOUNDATION DETAIL FOUNDATION FOR MODULAR 20, 35, 40 MAST ARM STRUCTURES	DETAIL NO. G-3271-1
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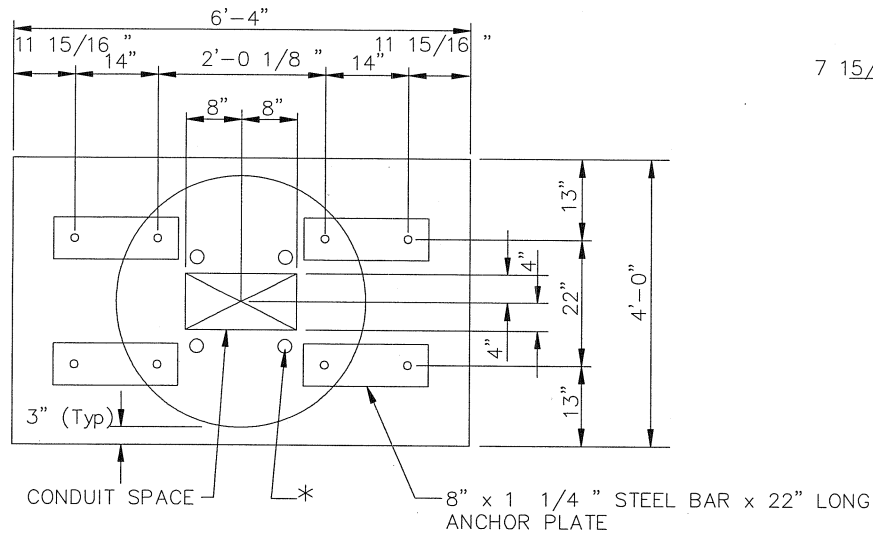
DETAIL NO.
G-3271-2

CITY OF GOODYEAR
STANDARD DETAIL

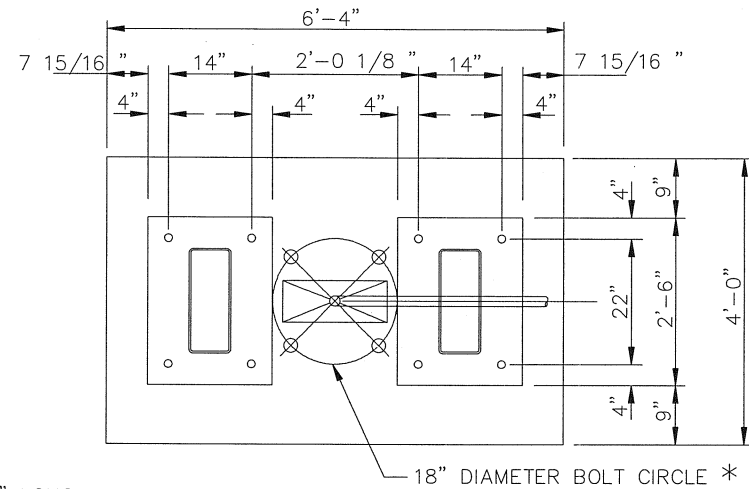
APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

TRAFFIC SIGNAL FOUNDATION DETAIL
FOUNDATION FOR MODULAR 20, 35, 40 MAST ARM STRUCTURES

DETAIL NO.
G-3271-2



ANCHOR BOLT LAYOUT PLAN



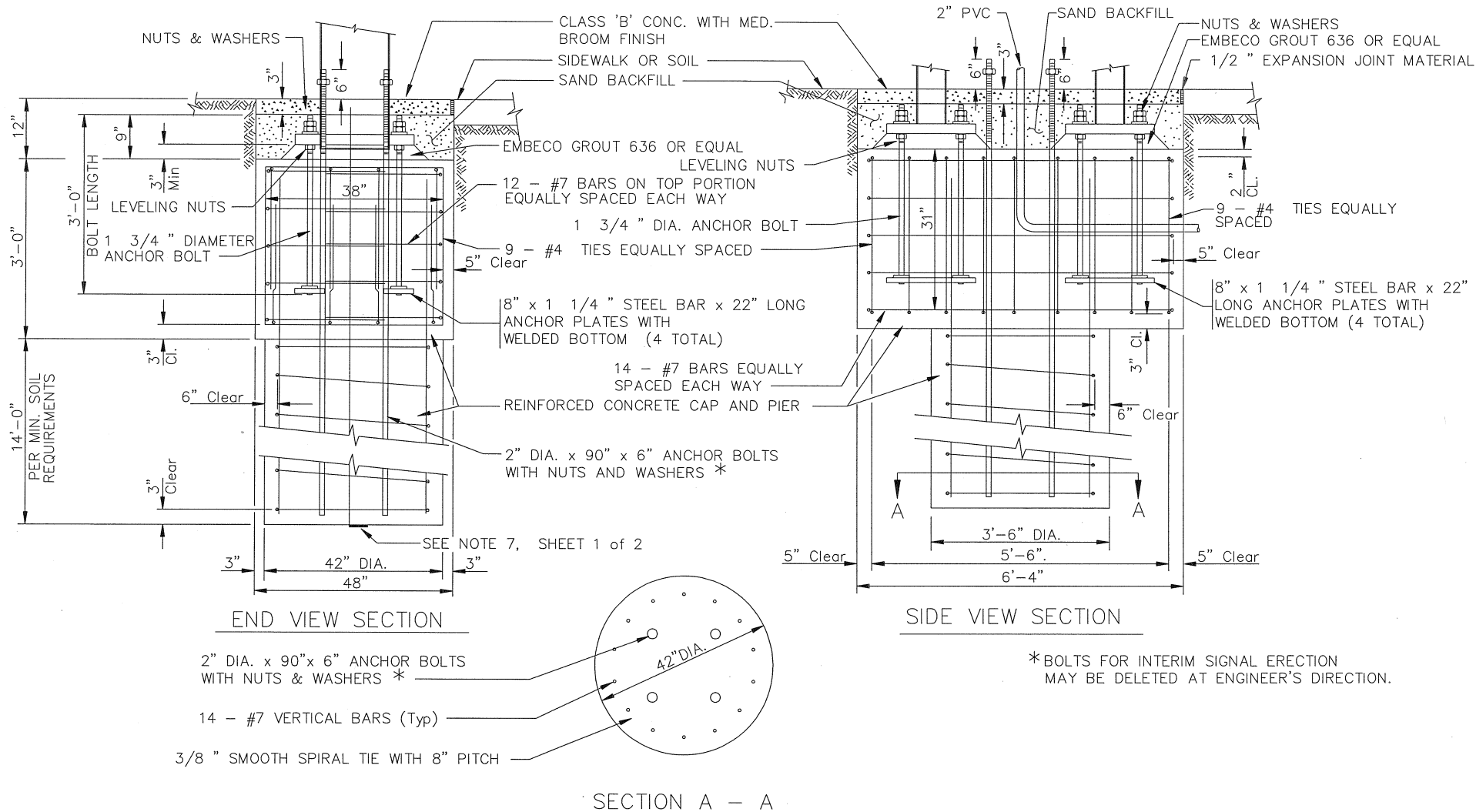
BASE PLATE LAYOUT PLAN

GENERAL NOTES

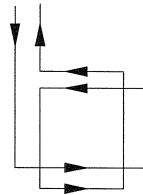
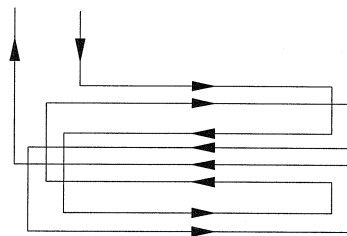
1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS. SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. AT 28 DAYS.
4. REBAR GRADE 60.
5. EMBEDDED PLATES - A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED.
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

*BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

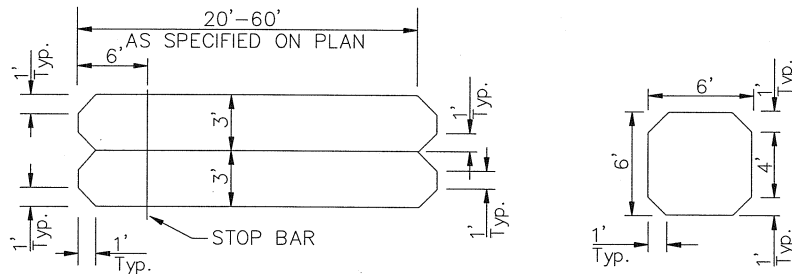
DETAIL NO. G-3272-1	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	TRAFFIC SIGNAL FOUNDATION DETAIL FOUNDATION FOR MODULAR 45 MAST ARM STRUCTURE	DETAIL NO. G-3272-1
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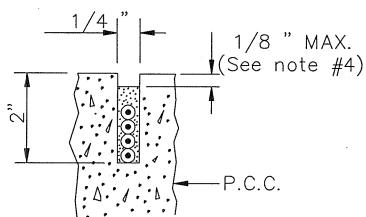
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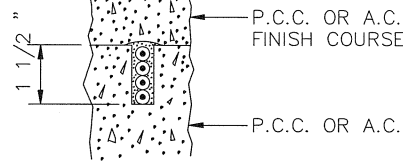
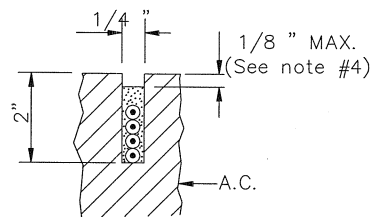
WIRING DIAGRAM FOR OCCUPANCY LOOP DETECTOR
LOOP DUCT (ORANGE)



OCCUPANCY LOOP DETECTOR SAW CUT PATTERN



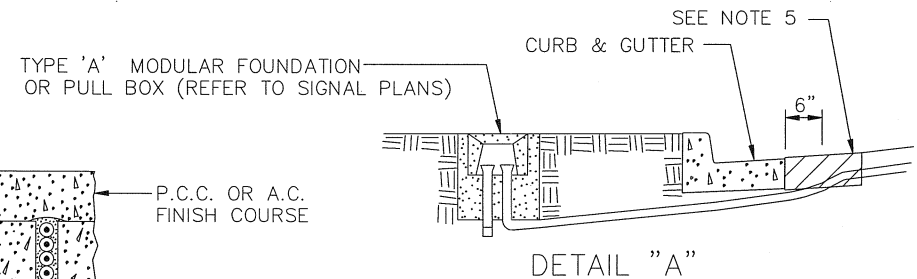
LOOPS IN FINISH COURSE



LOOPS IN SUB-BASE

NOTES:

1. CUT THE DIAGONALS AS SHOWN TO PREVENT SHARP BENDS IN THE WIRE. OVERCUT THE DIAGONALS SO THAT THE CORNERS HAVE THE FULL DEPTH REQUIRED.
2. THE SAW CUT SHALL BE AS SHOWN UNLESS OTHERWISE NOTED.
3. BLOW OUT ALL SAW CUTS BEFORE INSERTING THE WIRES. WIRES SHALL BE INSERTED IN SUCH A MANNER THAT THE INSULATION SHALL NOT BE DAMAGED.
4. SAW CUTS SHALL BE FILLED WITH EPOXY LOOP SEALANT, OR EQUIVALENT SEALANT AS APPROVED BY CITY ENGINEER.
5. USE SAME MATERIAL (OR APPROVED EQUAL) FOR PATCHING EXISTING PAVEMENT. PATCH TO AT LEAST 1/4 " HIGHER THAN SURFACE OF EXISTING PAVEMENT.
6. ALL DETECTOR LOOPS SHALL BE GIVEN A CONTINUITY AND INSULATION TEST BEFORE AND AFTER PLACING THE FINAL PAVING OR PLACING THE SEALER IN THE SAW CUTS.
7. LOOP DETECTORS SHALL BE LOCATED IN CENTER OF TRAVELED LANE UNLESS OTHERWISE NOTED ON PLANS AND SHALL BE APPROVED PRIOR TO SAW CUTTING.
8. LEFT-TURN LANE DETECTOR LEAD-IN SHALL BE INSTALLED IN A SEPARATE SAW CUT.
9. NO MORE THAN TWO ADJACENT DETECTOR LEAD-INS SHALL BE IN THE SAME SAW CUT.
10. DETECTOR LEAD-IN SAW CUTS SHALL BE 1' APART.



DETAIL NO.
G-3275

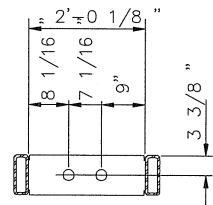
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

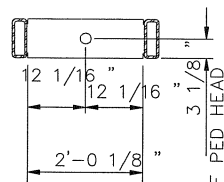
7/97

TRAFFIC LOOP DETECTOR DETAIL

DETAIL NO.
G-3275



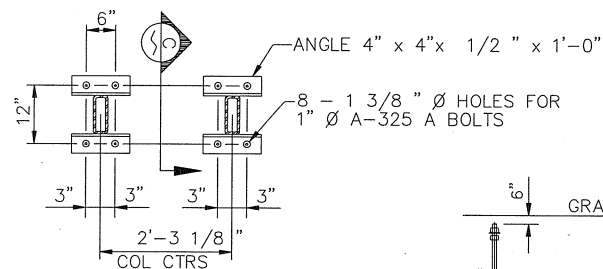
SECTION A



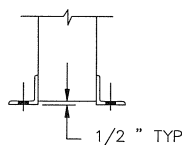
SECTION B

FACE OF PED HEAD

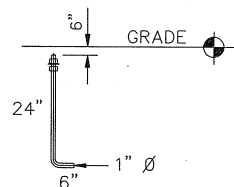
*PANELS & PANEL CUTOUTS SHALL BE DETERMINED BY INTERSECTION DESIGN



ANCHOR BOLT SETTING PLAN

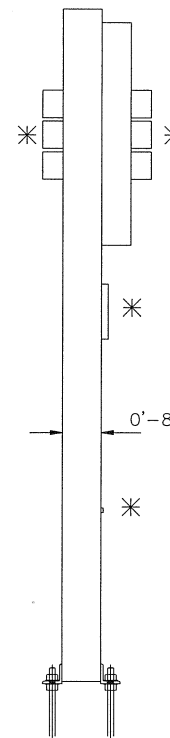
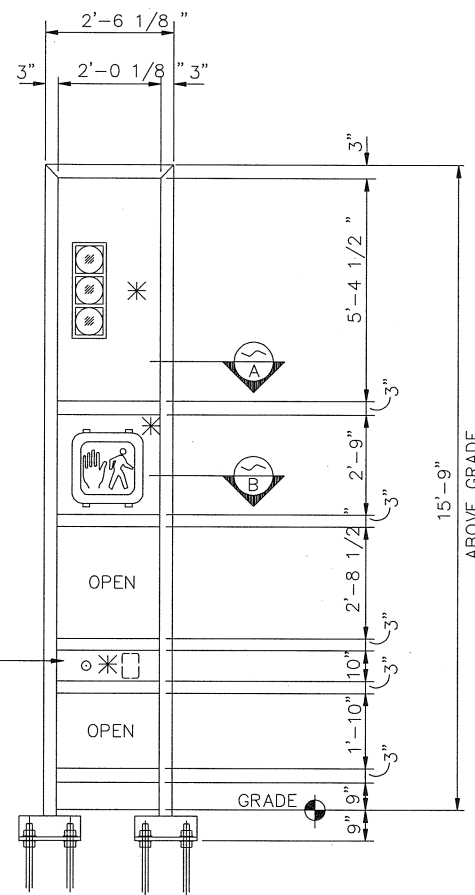


TYP SECTION C



ANCHOR BOLT WITH NUTS & WASHERS (8 TOTAL)

TERMINAL BLOCK BEHIND PANEL



PROFILE

DETAIL NO.
G-3288

CITY OF GOODYEAR
STANDARD DETAIL

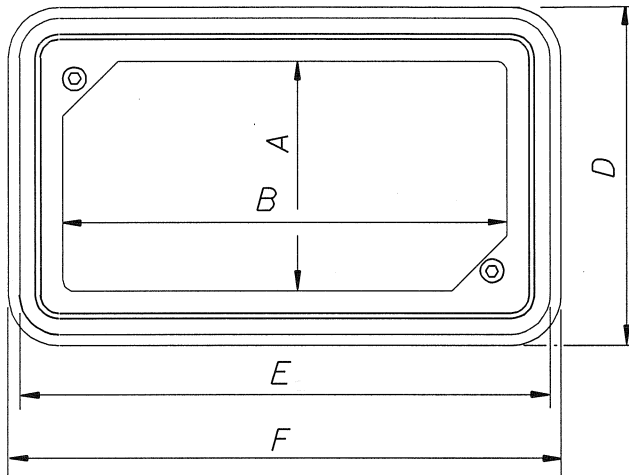
APPROVED BY:
Goodyear Standards and
Policies Committee

7/97

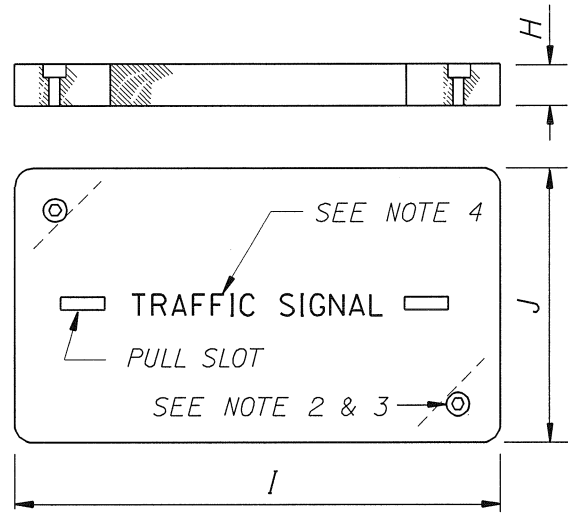
MODULAR POLE 'A-1'

DETAIL NO.
G-3288

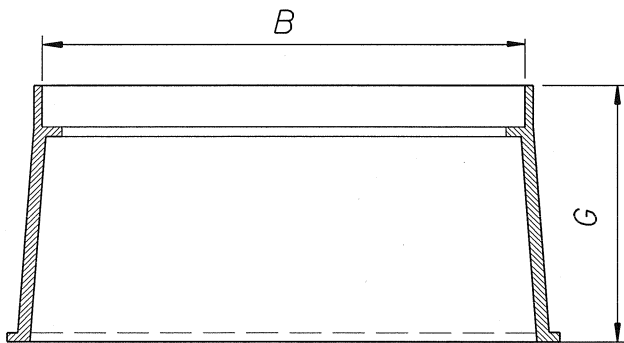
PULL BOX TYPE	A	B	C	D	E	F	G	H	I	J
#3 1/2	8 3/4"	14"	12 1/2"	14 7/16"	18"	19 3/4"	12"	1 5/8"	15 3/8"	10"
#5	22"	16 1/4"	17"	19 5/8"	26"	29"	12"	2"	23 1/8"	13 3/4"
#7	16 1/4"	16 1/4"	20 3/4"	23 1/4"	34"	36 7/8"	18"	2"	30 1/2"	17 5/8"



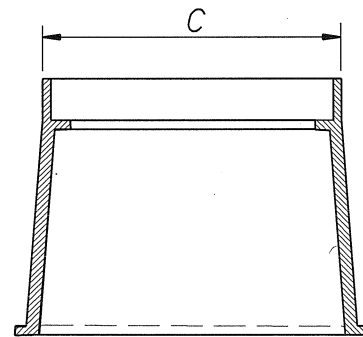
PULL BOX PLAN



COVER



PULL BOX SECTION



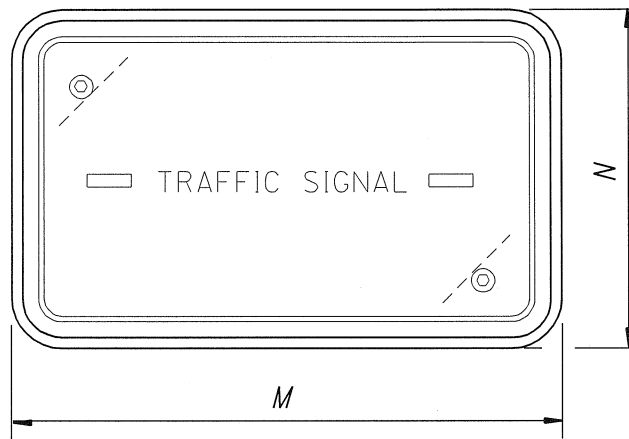
SIDE VIEW

NOTES:

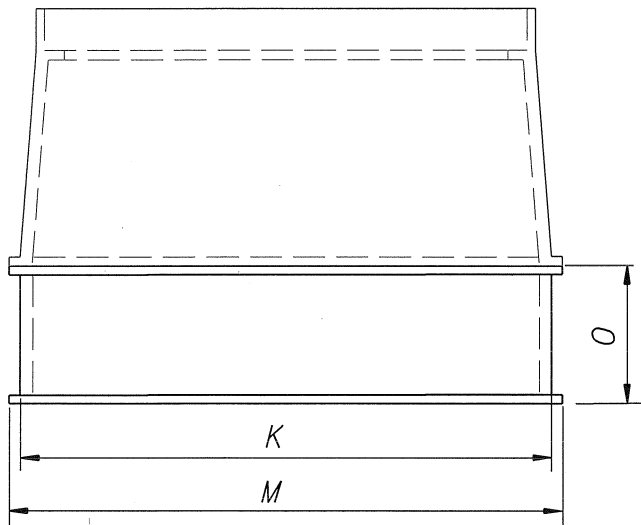
1. PULL BOX SHALL BE CONSTRUCTED OF POLYMER CONCRETE REINFORCED WITH HEAVY-WEAVE FIBERGLASS. CHRISTY FIBRELITE FL9 (#3 1/2), FL (# 5 PULL BOX), FL36 (# 7 PULL BOX) OR APPROVED EQUAL. SEE MCDOT SUPPLEMENT SECTIONS 470 THRU 478.
2. COVERS SHALL BE SECURED WITH 3/8" BOLTS AND WASHERS WHICH SHALL BE OF BRASS, STAINLESS STEEL, OR OTHER CORROSION RESISTANT MATERIALS.
3. INSERTS IN BOX, FOR COVER BOLTS, SHALL BE OF BRASS, STAINLESS STEEL OR OTHER CORROSION RESISTANT MATERIALS.
4. THE WORDS 'TRAFFIC SIGNAL' SHALL BE CAST ON PULL BOX COVER IN 1" HIGH LETTERS.
5. FOR TYPICAL PULL BOX INSTALLATION SEE MCDOT STANDARD DRAWING NO. 4713.
6. FOR PULL BOX EXTENSIONS SEE MCDOT STANDARD DRAWING NO. 4712.

PULL BOX DETAIL

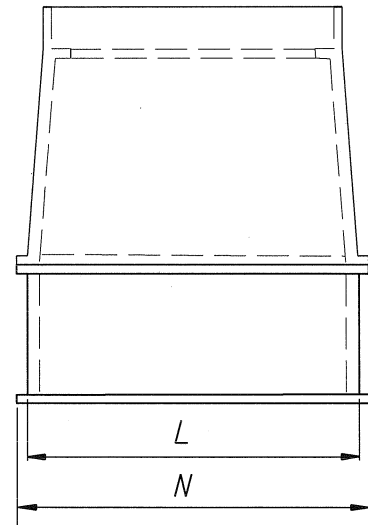
PULL BOX TYPE	K	L	M	N	O
#5	26 1/4"	16 7/8"	29"	19 5/8"	8"
#7	33 7/8"	21"	36 7/8"	24 1/4"	8"



PULL BOX PLAN



FRONT VIEW



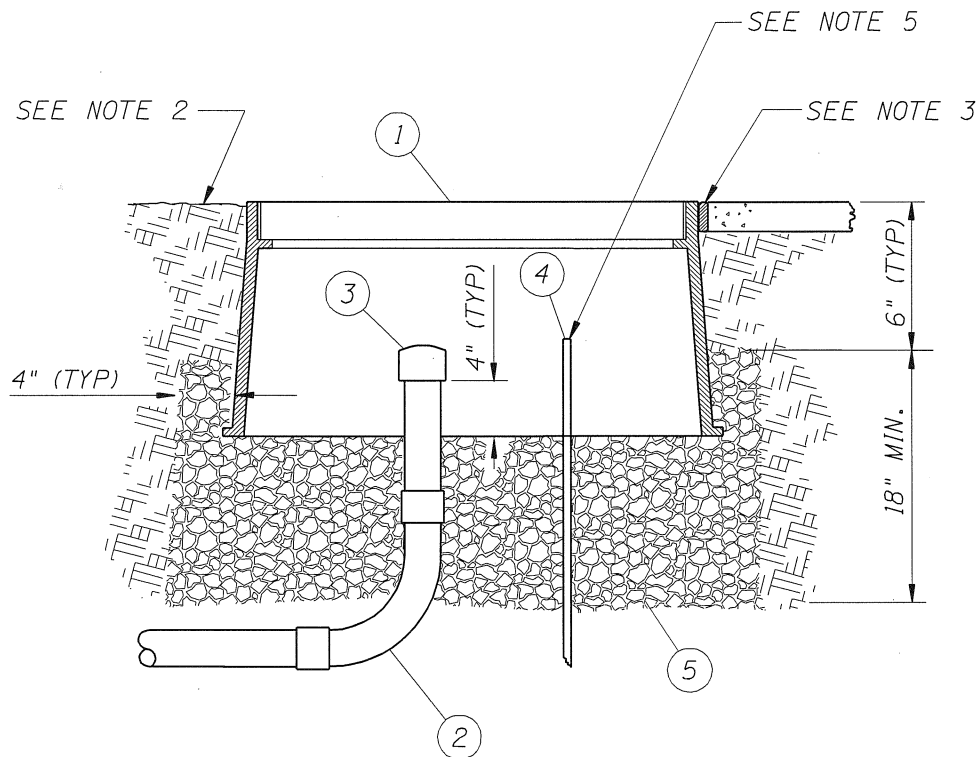
SIDE VIEW

NOTE:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS, SEE MCDOT SUPPLEMENT SECTIONS 471 THRU 478.
2. PULL BOX SHALL BE CONSTRUCTED OF POLYMER CONCRETE REINFORCED WITH HEAVY-WEAVE FIBERGLASS. CHRISTY FIBRELITE FL30 (#5 PULL BOX), FL36 (#7 PULL BOX) OR APPROVED EQUAL.

PULL BOX EXTENSION

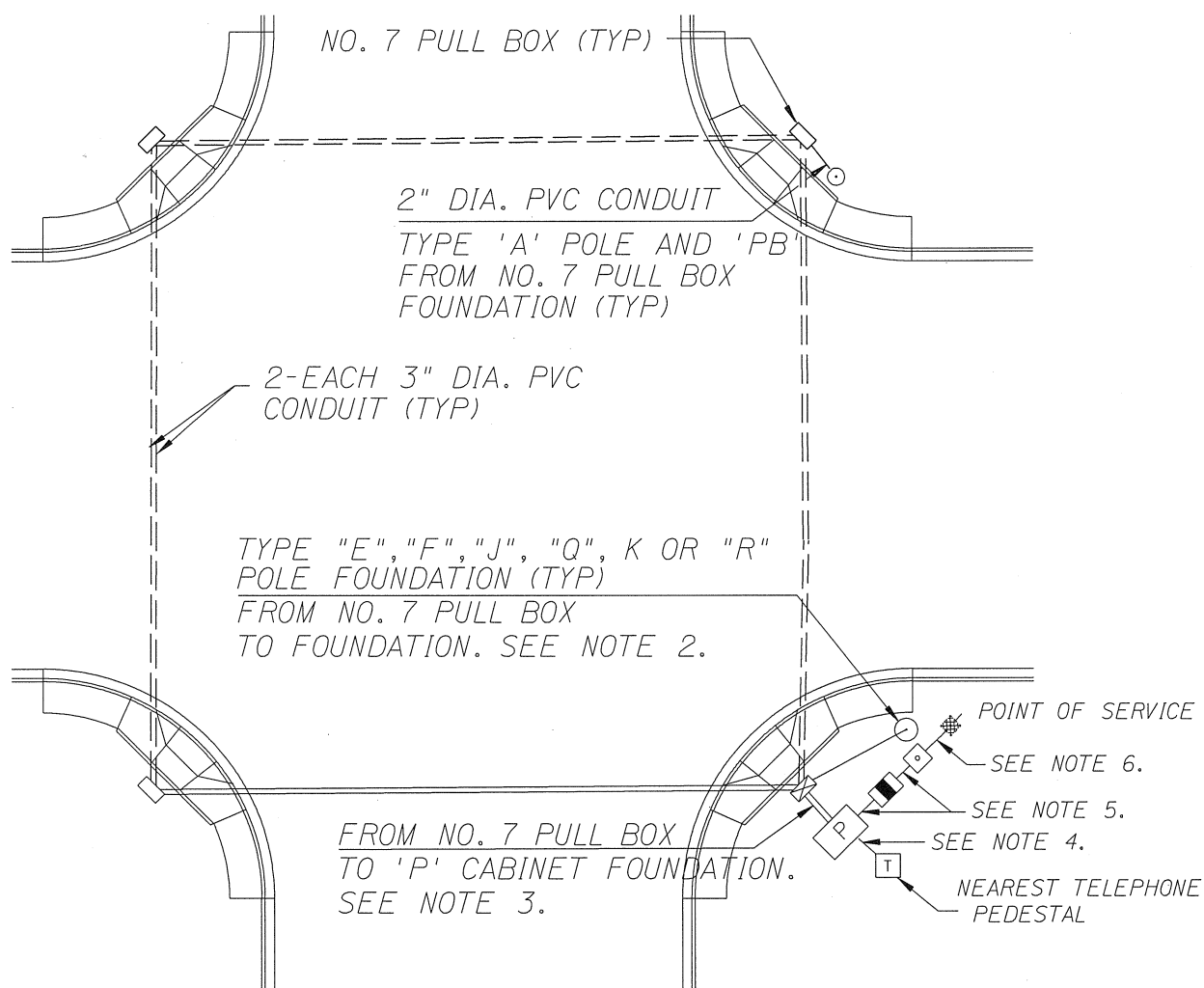
ITEM	QTY.	DESCRIPTION
①	1	PULL BOX (SEE STD. DWG. 4711)
②	1	PVC ELECTRICAL CONDUIT, SCH. 40
③	1	PVC CAP
④	1	5/8" x 8' LONG GROUNDING ELECTRODE
⑤	1	1" SHORT GRADE ROCK



NOTES:

1. FOR MATERIAL AND CONSTRUCTION INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. BACKFILL WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACT.
3. EXPANSION JOINT MATERIAL SHALL BE USED AROUND PULL BOX WHEN INSTALLED IN CONCRETE AREA.
4. WHEN INSTALLING PVC CONDUIT IT SHALL ENTER NEAR SIDES OF PULLBOX.
5. GROUNDING ELECTRODE.

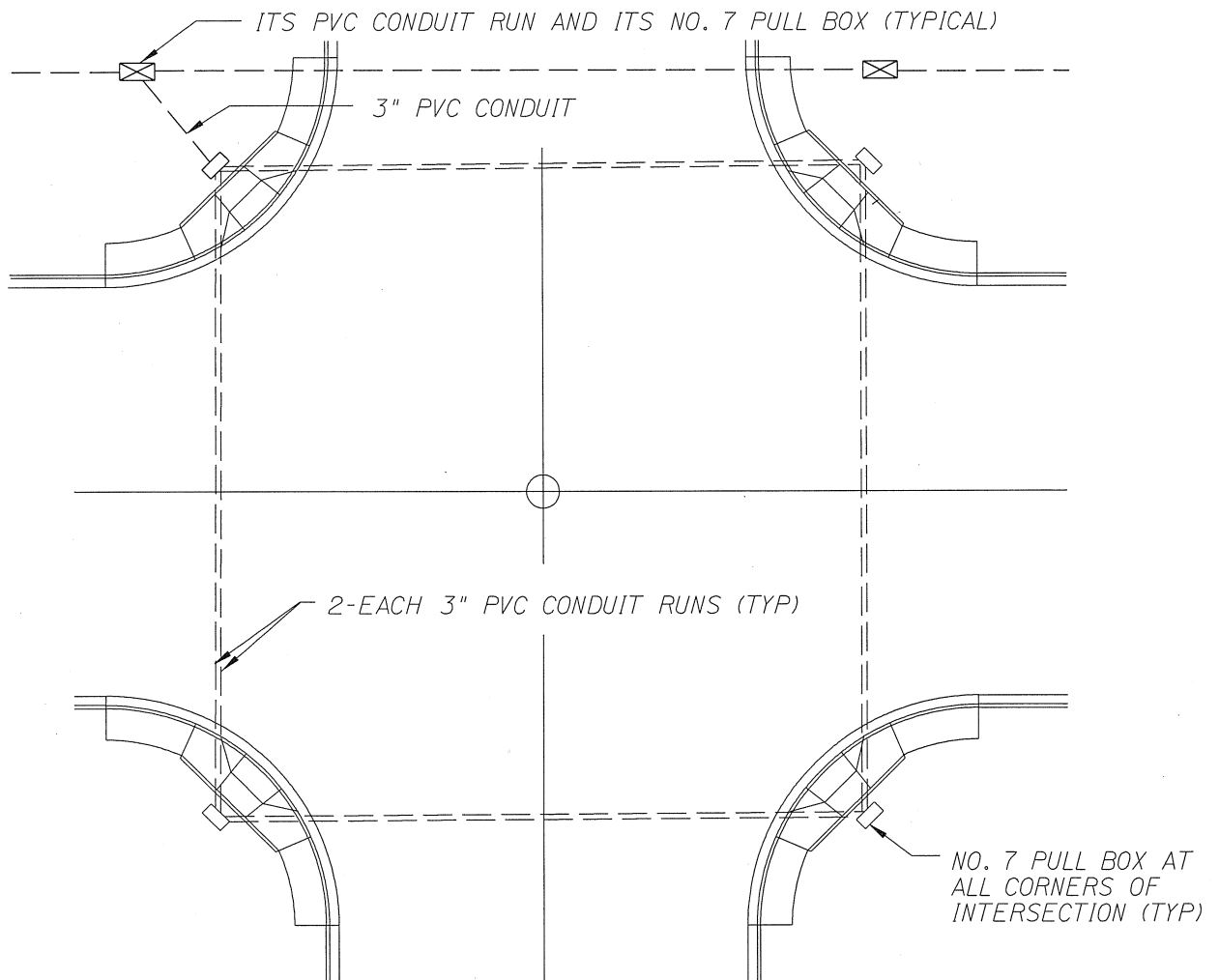
TYPICAL PULL BOX INSTALLATION



NOTES:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. INSTALL 3" DIA. PVC CONDUIT FOR TYPE 'E', 'F', 'J', 'Q', 'K', or 'R' POLES.
3. INSTALL 2-EACH 3" DIA. PVC CONDUIT.
4. INSTALL PVC CONDUIT BETWEEN TELEPHONE SERVICE PEDESTAL AND CONTROLLER CABINET. (IF APPLICABLE AS PER SIGNAL PLANS).
5. INSTALL 2" DIA. PVC CONDUIT BETWEEN SERVICE PEDESTAL, BATTERY BACKUP SYSTEM AND CONTROLLER CABINET.
6. INSTALL 2½" OR 3" DIA. PVC CONDUIT BETWEEN POINT OF SERVICE AND SERVICE PEDESTAL AS REQUIRED BY THE THE ELECTRICAL UTILITY COMPANY.

TYPICAL SIGNAL CONDUIT RUN LAYOUT



NOTE:

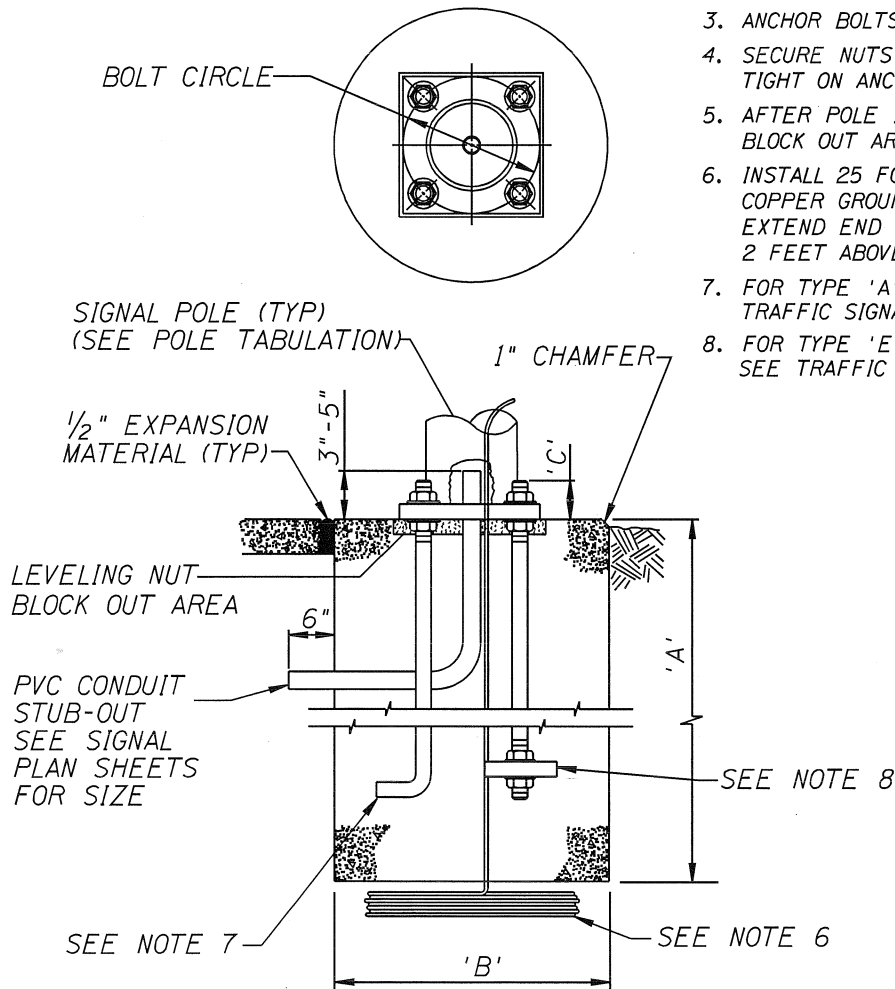
1. FOR ITS CONDUIT AND PULL BOXES, SEE MCDOT SUPPLEMENT, SECTION 481 AND MCDOT DETAILS 4801, 4810 AND 4812.
2. QUANTITY AND SIZE OF ITS CONDUIT AS PER THE PLANS.

ITS INTERCONNECT CONNECTION

POLE TYPE	BOLT CIRCLE	ANCHOR BOLTS	BLOCK OUT AREA	DIM. A	DIM. B	DIM. C
A-14'	10 1/2"	1" x 36" x 4"	11" x 11" x 1"	3'	2'	3"
E	11 1/2"	1 1/4" x 52" w/PLATE	12" x 12" x 1"	5'	3'	3"
F	11 1/2"	1 1/4" x 52" w/PLATE	12" x 12" x 1"	5'	3'	3"
PB	10 1/2"	3/4" x 16" x 4"	11" x 11" x 1"	2'	2'	2 1/2"

NOTES:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. UNLESS OTHERWISE SPECIFIED, SET ANCHOR BOLTS PARALLEL TO ROADWAY CENTERLINE.
3. ANCHOR BOLTS TO BE MAINTAINED PLUMB.
4. SECURE NUTS AND FLAT WASHERS WRENCH TIGHT ON ANCHOR BOLTS.
5. AFTER POLE IS SET AND PLUMBED GROUT BLOCK OUT AREA.
6. INSTALL 25 FOOT COIL OF NO.4 AWG BARE COPPER GROUNDING ELECTRODE AS SHOWN. EXTEND END OF GROUNDING ELECTRODE 2 FEET ABOVE TOP OF FOUNDATION.
7. FOR TYPE 'A' POLE ANCHOR BOLT DETAILS SEE TRAFFIC SIGNAL STANDARD DRAWING 4725.
8. FOR TYPE 'E' & 'F' POLE ANCHOR BOLT DETAILS SEE TRAFFIC SIGNAL STANDARD DRAWING 4741-2.

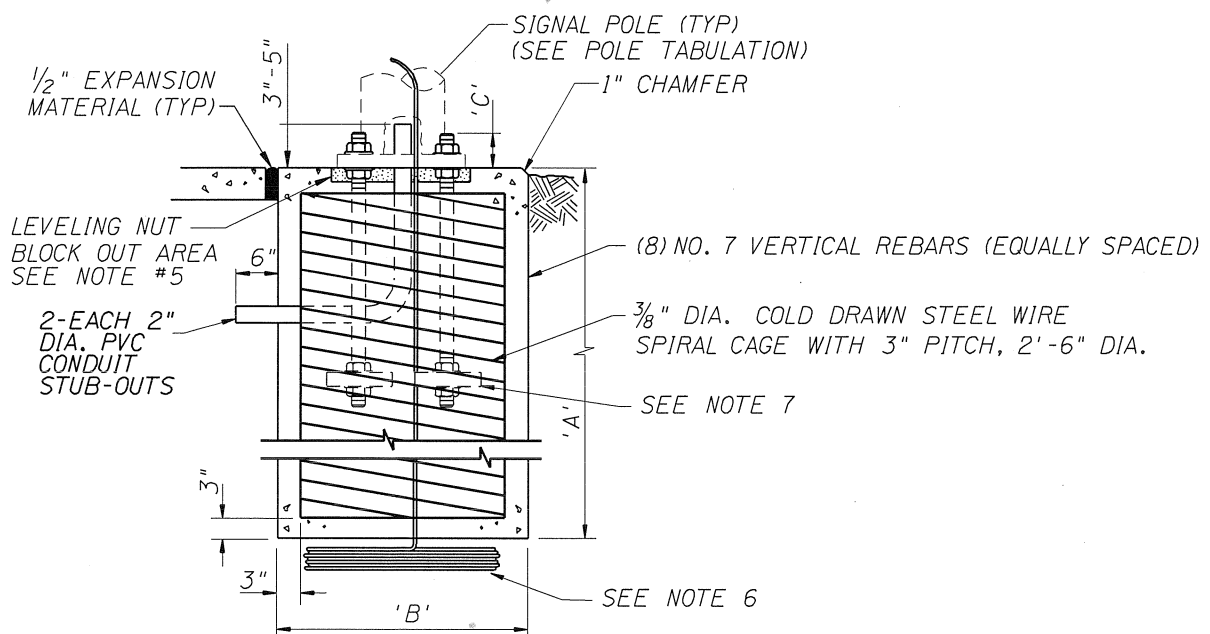
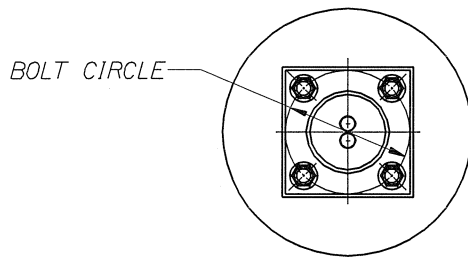


SIGNAL POLE FOUNDATIONS

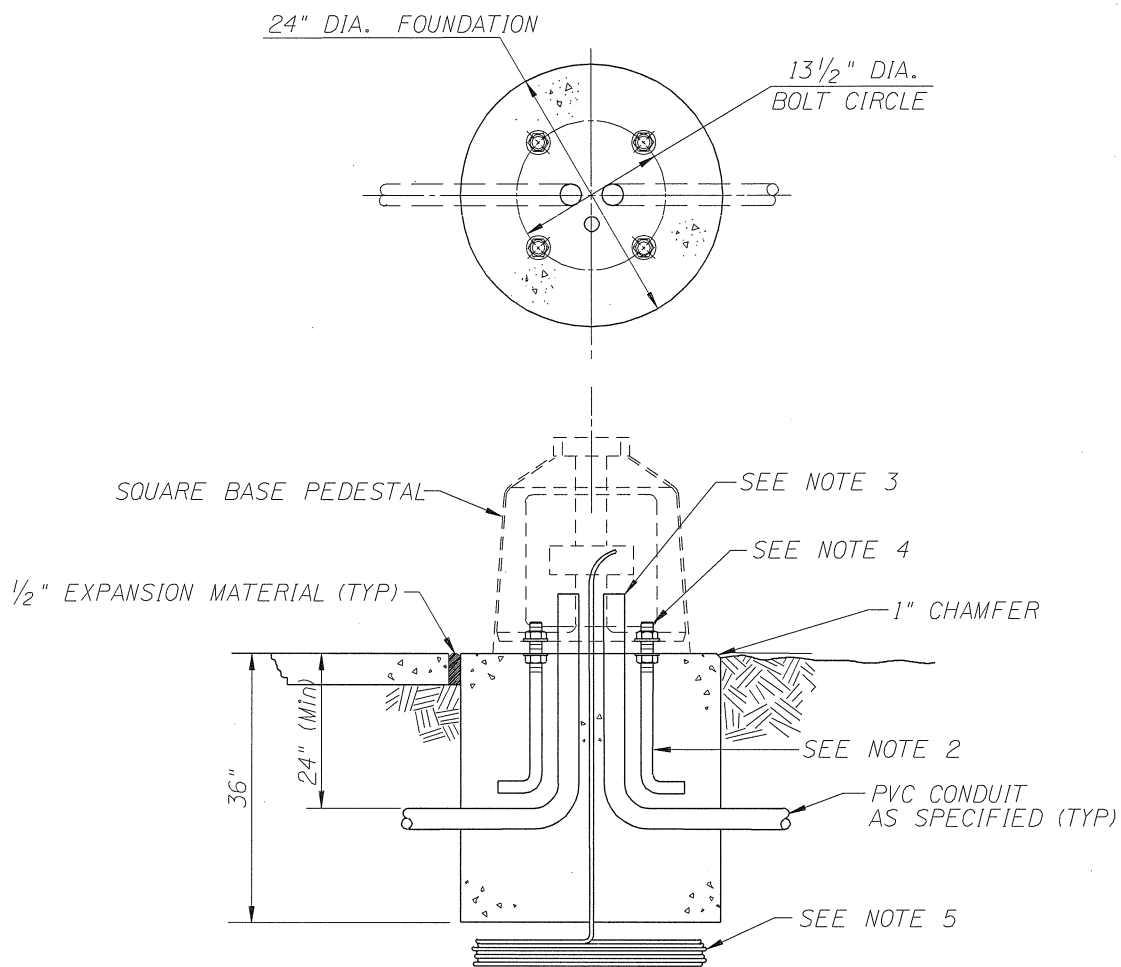
POLE TYPE	BOLT CIRCLE	ANCHOR BOLTS	BLOCK OUT AREA	DIM. A	DIM. B	DIM. C
'J'	18"	2"x70" w/plate	19" x 19" x 2"	10'	3'	5"
'Q'	18"	2"x70" w/plate	19" x 19" x 2"	10'	3'	5"
'K'	18"	2"x70" w/plate	19" x 19" x 2"	10'	3'	5"
'R'	18"	2"x70" w/plate	19" x 19" x 2"	10'	3'	5"

NOTES:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. UNLESS OTHERWISE SPECIFIED, SET ANCHOR BOLTS PARALLEL TO ROADWAY CENTERLINE.
3. ANCHOR BOLTS AND REBAR CAGE TO BE MAINTAINED PLUMB.
4. SECURE NUTS AND FLAT WASHERS WRENCH TIGHT ON ANCHOR BOLTS.
5. AFTER POLE IS SET AND PLUMBED GROUT BLOCK OUT AREA.
6. INSTALL 25 FOOT COIL OF NO. 4 AWG BARE COPPER GROUNDING ELECTRODE AS SHOWN. EXTEND END OF GROUNDING ELECTRODE 2 FEET ABOVE TOP OF FOUNDATION.
7. FOR ANCHOR BOLT INFORMATION SEE TRAFFIC SIGNAL STANDARD DRAWING 4726.



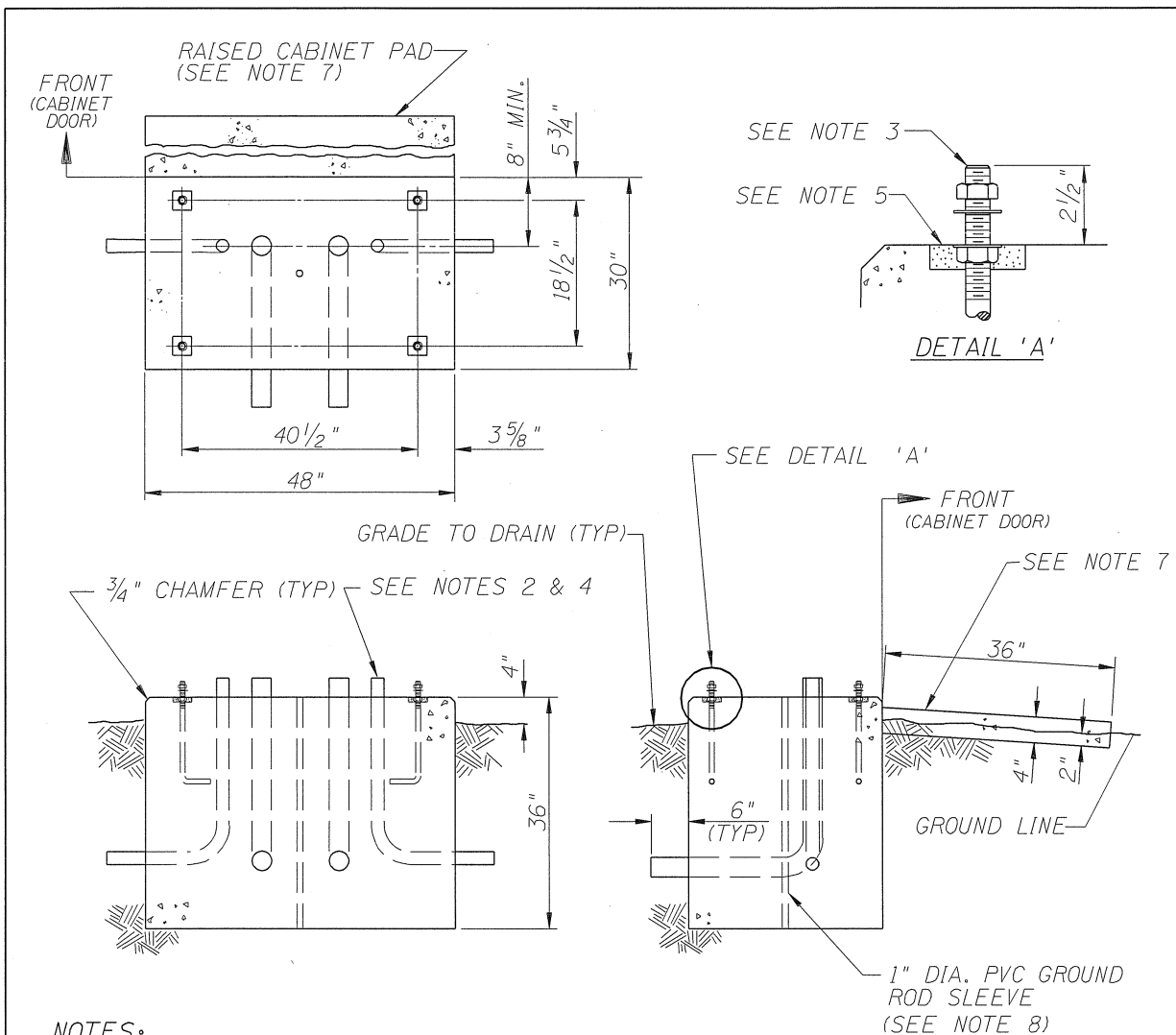
SIGNAL POLE FOUNDATIONS



NOTES:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. FOR ANCHOR BOLT INFORMATION SEE TRAFFIC SIGNAL STANDARD DRAWING 4725.
3. CONDUIT SHALL EXTEND A MINIMUM OF 3" AND MAXIMUM OF 5" ABOVE THE TOP OF THE FOUNDATION
4. ANCHOR BOLTS SHALL EXTEND 2" ABOVE THE FOUNDATION.
5. INSTALL 25 FOOT COIL OF NO.4 AWG BARE COPPER GROUNDING ELECTRODE AS SHOWN. EXTEND END OF GROUNDING ELECTRODE 2 FEET ABOVE TOP OF FOUNDATION.
6. USE GROUT OR MASTIC TO SEAL GAP BETWEEN SQUARE BASE PEDESTAL AND FOUNDATION.
7. FOR CONDUIT SIZE, LOCATION AND QUANTITY, SEE SIGNAL PLAN.

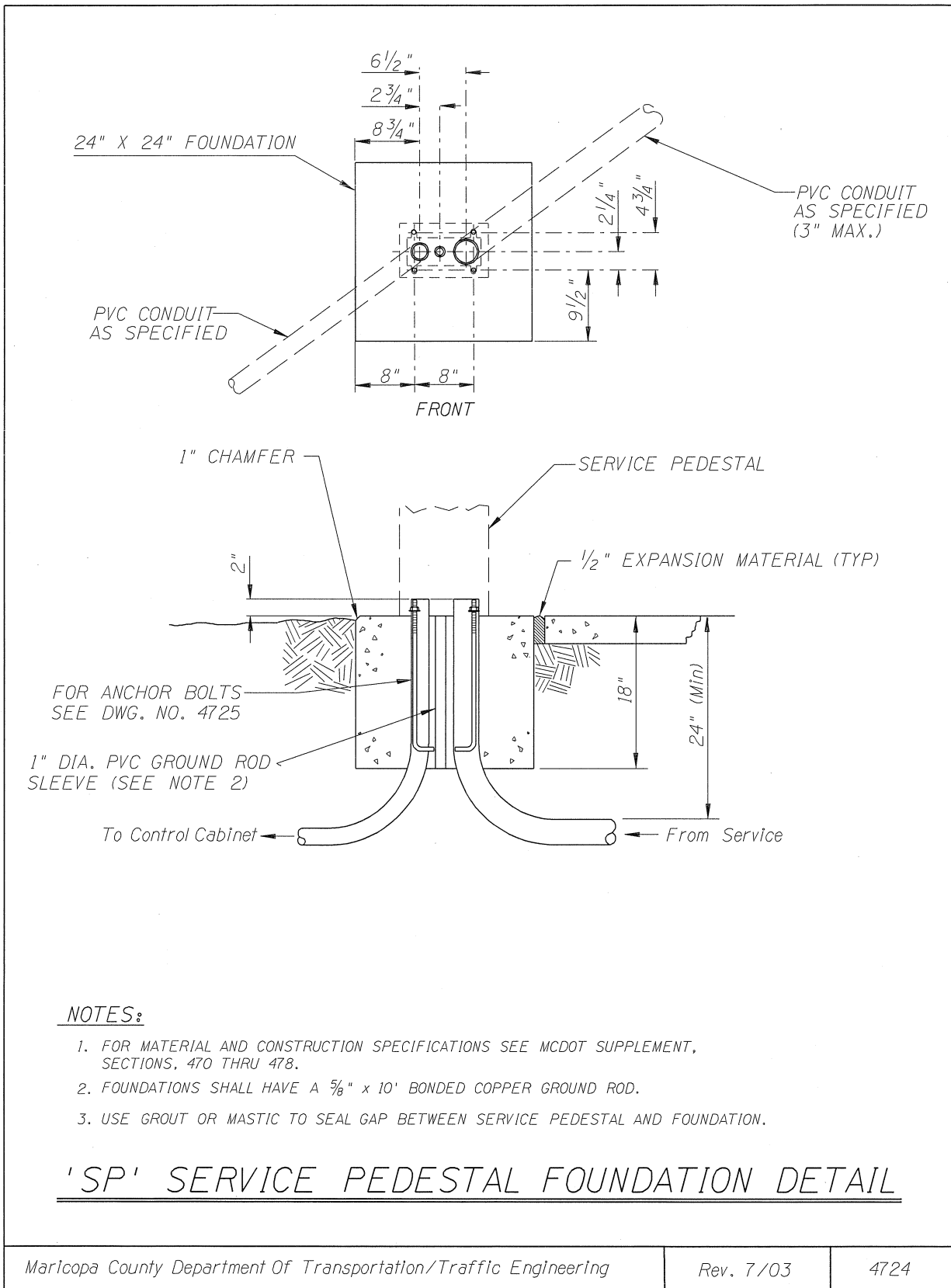
SQUARE BASE ('SB') POLE FOUNDATION DETAIL
ITS INSTALLATION ONLY



NOTES:

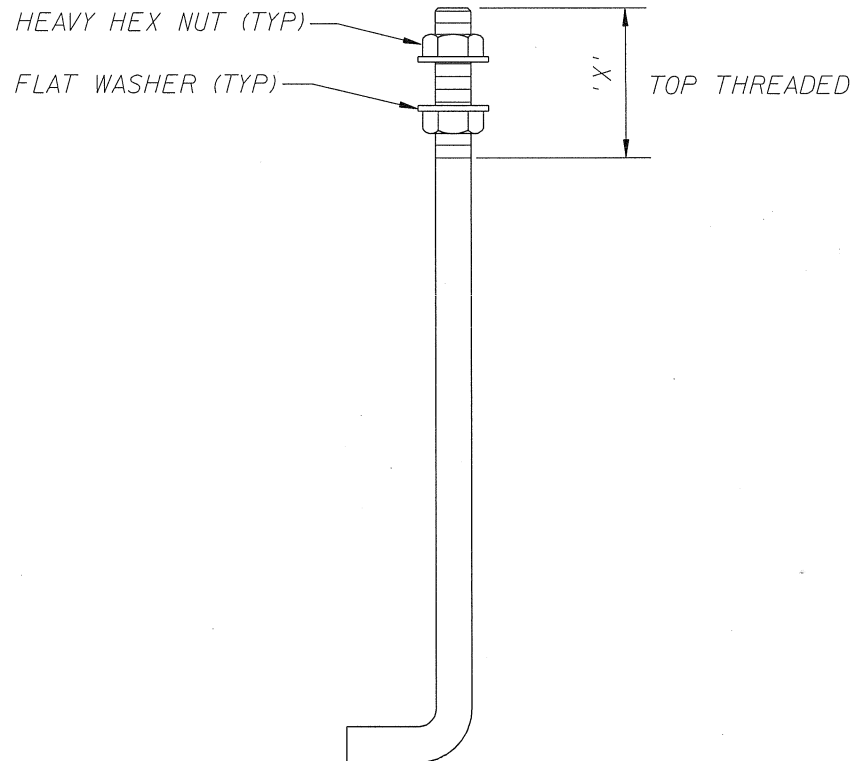
1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. FOR CONDUIT SIZE, LOCATION, AND QUANTITY, SEE TRAFFIC SIGNAL PLAN.
3. FOR ANCHOR BOLT INFORMATION SEE TRAFFIC SIGNAL STANDARD DRAWING 4725.
4. CONDUIT SHALL EXTEND A MINIMUM OF 2" AND MAXIMUM OF 4" ABOVE THE TOP OF THE FOUNDATION EXCEPT THE CONDUIT FOR THE GROUND ROD, WHICH SHALL BE FLUSH WITH THE TOP OF THE FOUNDATION.
5. DEPRESSIONS SHALL BE PROVIDED AROUND THE ANCHOR BOLTS FOR CABINET LEVELING.
6. GROUT OR MASTIC SHALL BE USED TO SEAL GAP BETWEEN THE CABINET AND THE FOUNDATION.
7. IN UNPAVED AREAS A RAISED CABINET PAD, 36" x 4" x 48", SHALL BE PLACED IN FRONT OF CABINET AND FACED AWAY FROM INTERSECTION. PAD SHALL BE SET 2" BELOW THE FOUNDATION ELEVATION. SLOPE PAD AWAY FROM CABINET.
8. THE CABINET FOUNDATION SHALL HAVE A 5/8" x 8' BONDING COPPER ROD.

'P' CABINET FOUNDATION



CABINET OR PEDESTAL	DRAWING NO.	ANCHOR BOLTS	DIM. X
'P' (CABINET)	4723	$\frac{3}{4}$ " x 16" x 4"	3"
'SP' (PEDESTAL)	4724	$\frac{1}{2}$ " x 12" x 3"	3"
'BBS' (CABINET)	4727	$\frac{1}{2}$ " x 12" x 3"	3"

POLE TYPE	DRAWING NO.	ANCHOR BOLTS	DIM. X
'A'	4720	1" x 36" x 4"	6"
'SB'	4744	$\frac{3}{4}$ " x 16" x 4"	3"
'PB'	4750	$\frac{3}{4}$ " x 16" x 4"	3"

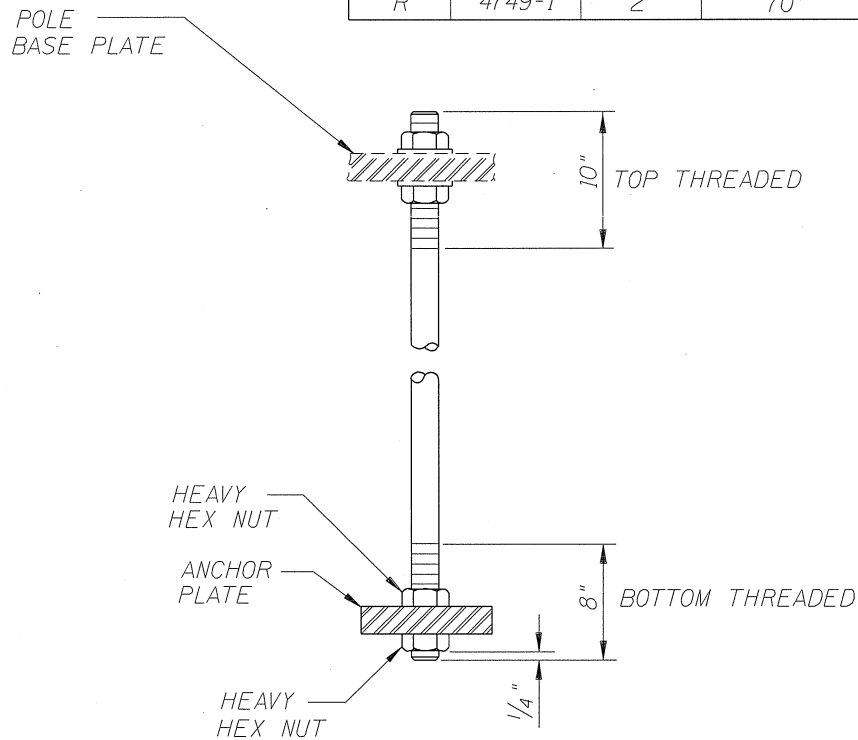


NOTES:

1. FOR MATERIAL AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. ALL ANCHOR BOLTS, WASHERS, AND NUTS SHALL BE FABRICATED FROM STEEL CONFORMING TO THE STRENGTH REQUIREMENTS OF ASTM A-325.
3. EACH ANCHOR BOLT SHALL INCLUDE TWO FLAT WASHERS AND TWO NUTS, AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM B-633.

ANCHOR BOLT W/ HOOK

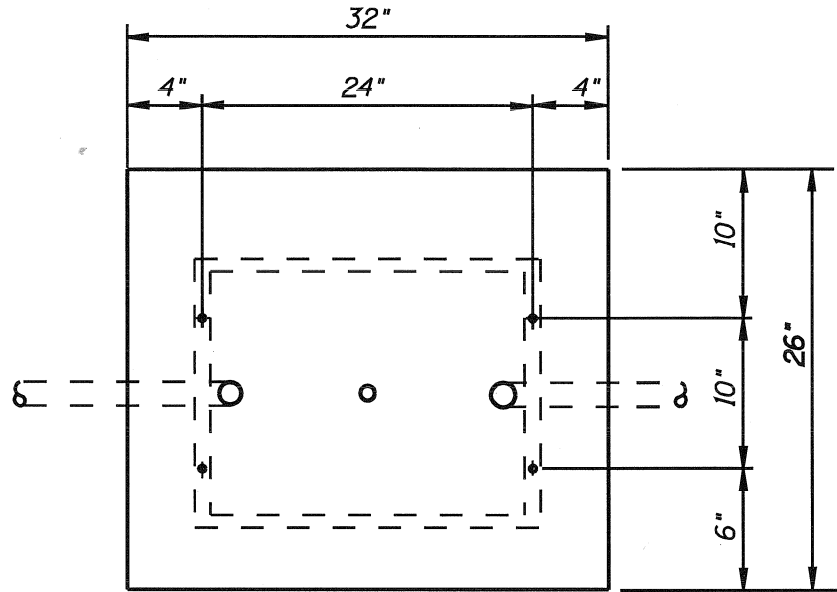
ANCHOR BOLT WITH PLATE				
POLE TYPE	DRAWING NO.	NOMINAL DIA.(In.)	TOTAL LENGTH(In.)	PLATE SIZE
'E'	4740	1 1/4"	52"	7/8" x 3 1/2" x 3 1/2"
'F'	4741-1	1 1/4"	52"	7/8" x 3 1/2" x 3 1/2"
'J'	4742	2"	70"	1 1/2" x 5 1/2" x 5 1/2"
'O'	4743	2"	70"	1 1/2" x 5 1/2" x 5 1/2"
'K'	4748	2"	70"	1 1/2" x 5 1/2" x 5 1/2"
'R'	4749-1	2"	70"	1 1/2" x 5 1/2" x 5 1/2"



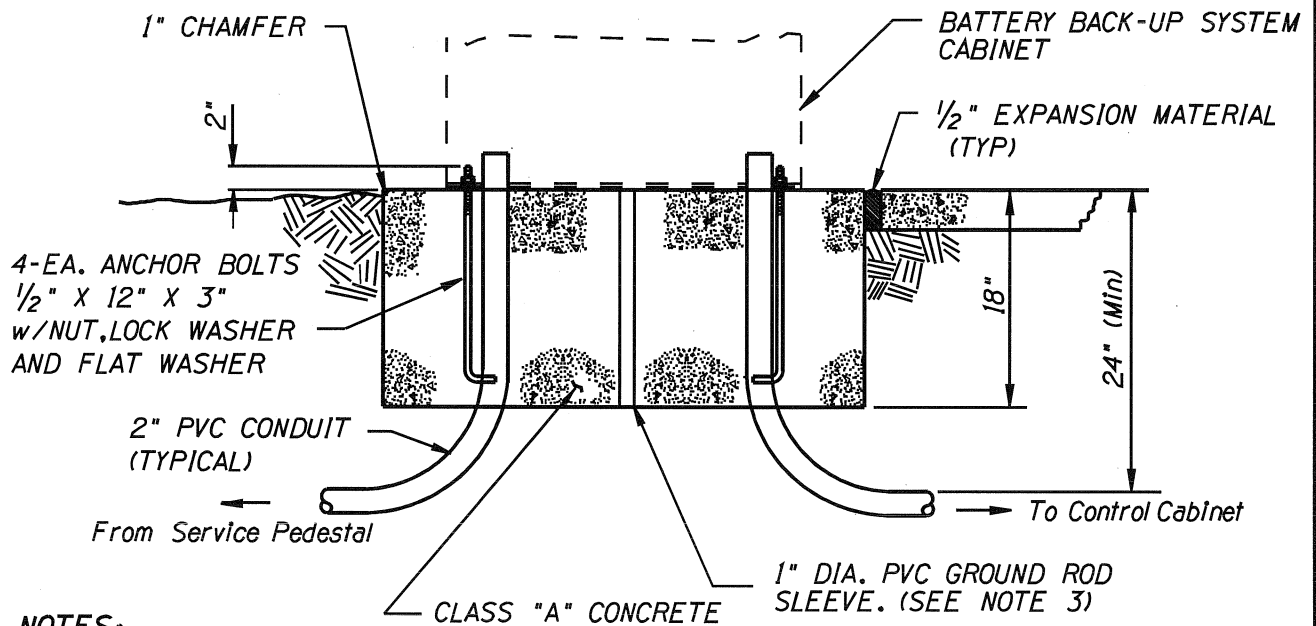
NOTES:

1. FOR INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. ALL ANCHOR BOLTS, WASHERS, AND NUTS SHALL BE FABRICATED FROM STEEL CONFORMING TO THE STRENGTH REQUIREMENTS OF ASTM A-325.
3. EACH ANCHOR BOLT SHALL INCLUDE FOUR (4) FLAT WASHERS AND FOUR (4) NUTS, AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM B-633.

ANCHOR BOLT W/ PLATE



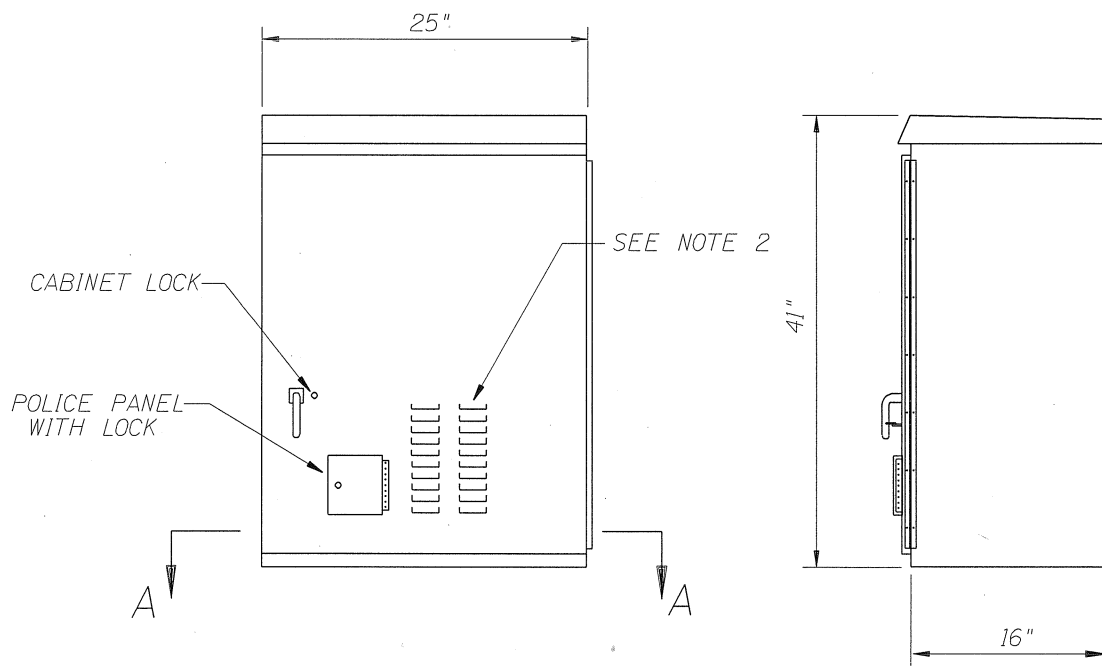
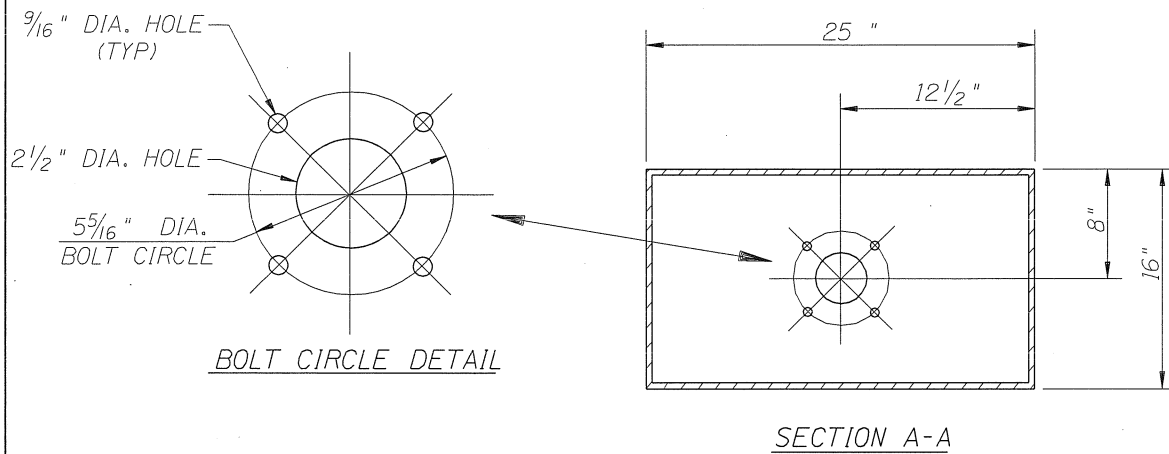
FRONT



NOTES:

1. USE GROUT OR MASTIC TO SEAL GAP BETWEEN BATTERY BACK-UP CABINET AND FOUNDATION.
2. ANCHOR BOLTS SHALL EXTEND 2" ABOVE THE FOUNDATION.
3. FOUNDATION SHALL HAVE A 5/8" X 10' BONDED COPPER GROUNDING ROD.
4. CONDUIT SHALL EXTEND A MINIMUM OF 3" AND MAXIMUM OF 5" ABOVE THE TOP OF THE FOUNDATION

BATTERY BACK-UP SYSTEM (BBS) FOUNDATION DETAIL

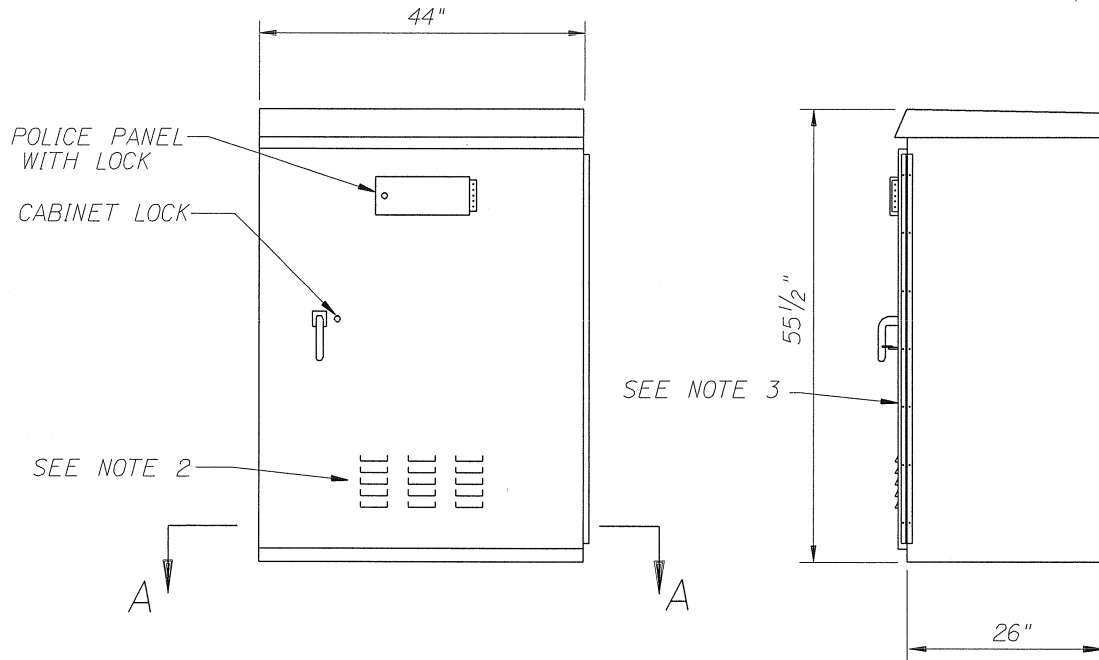
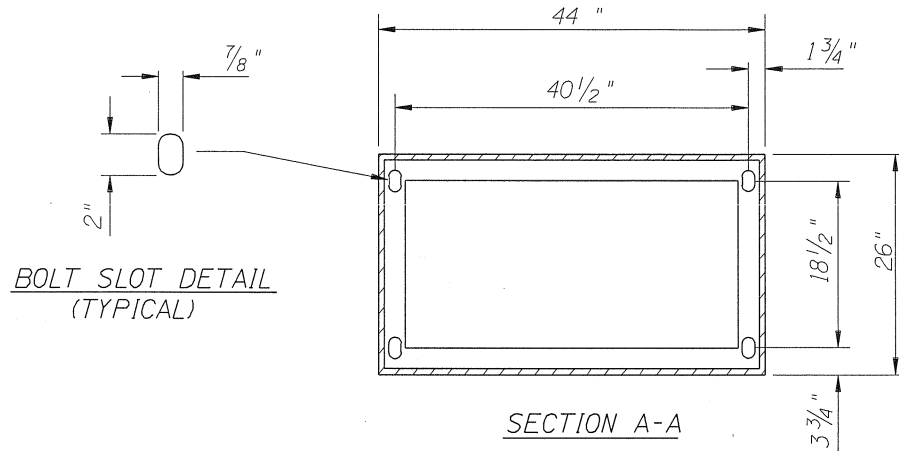


NOTES:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. VENTILATING AIR INLET LOUVERS WITH 12"x12"x1" AIR FILTER

'G' CABINET

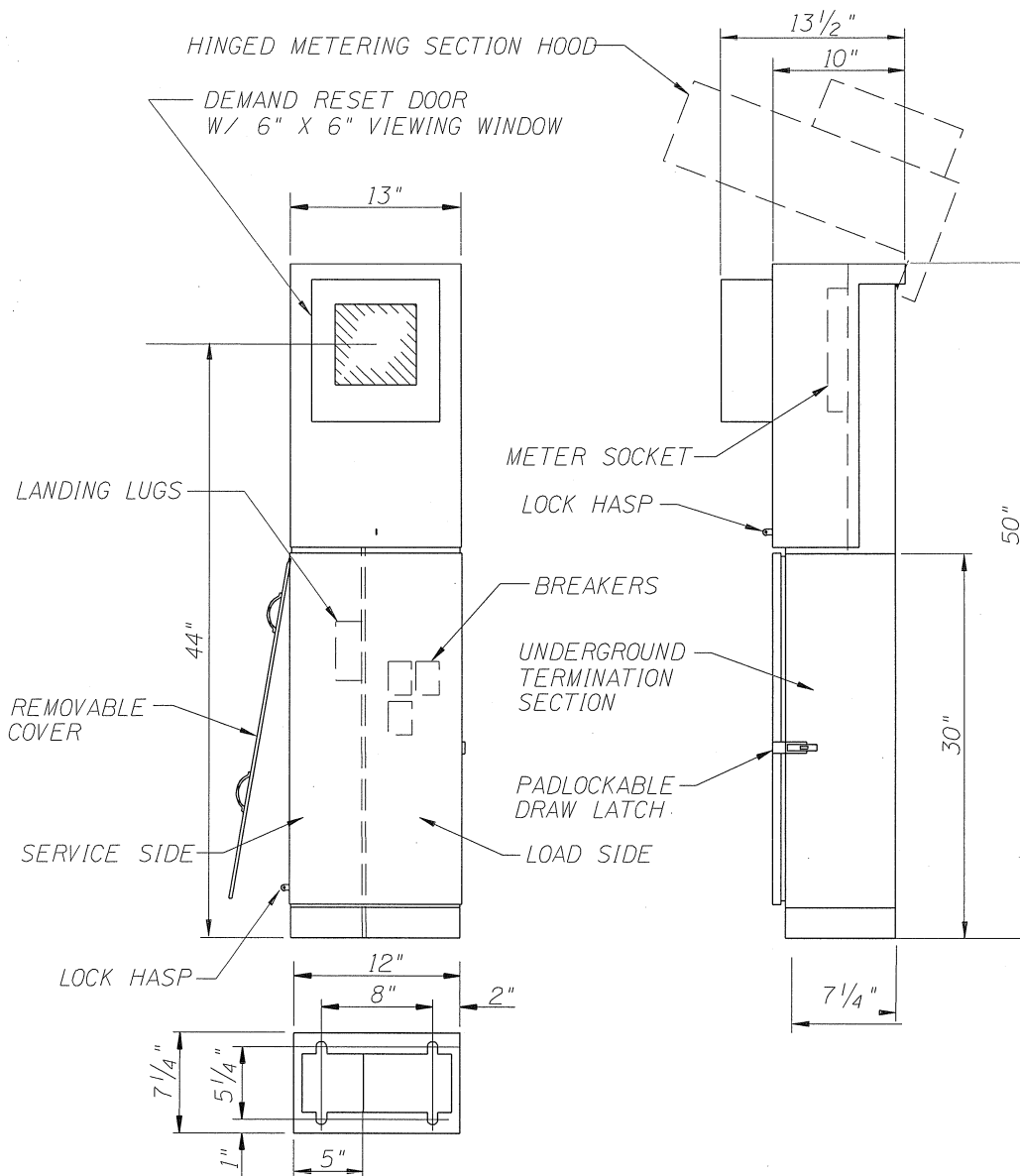
ITS INSTALLATION ONLY



NOTES:

1. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. VENTILATING AIR INLET LOUVERS 12"x24"x1" AIR FILTER.
3. FRONT OF CABINET SHALL FACE AWAY FROM INTERSECTION.

'P' CABINET

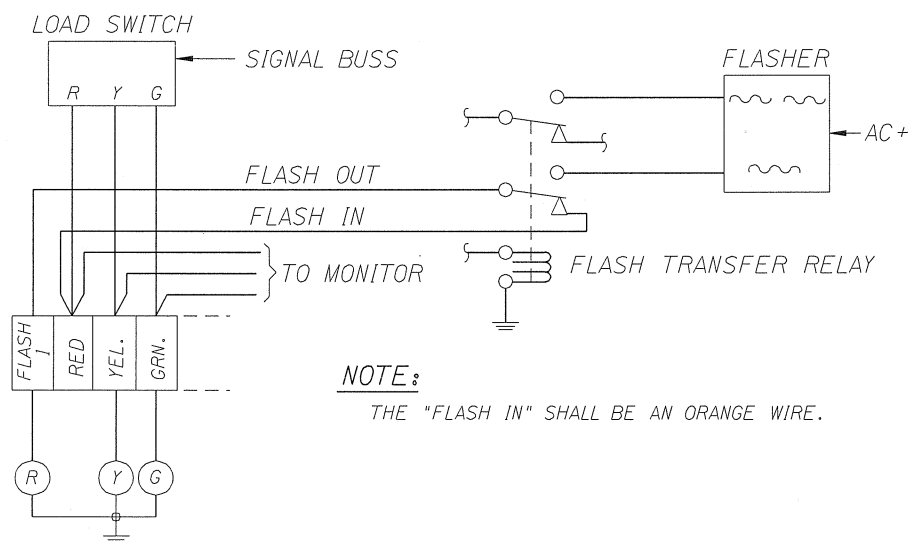


NOTES:

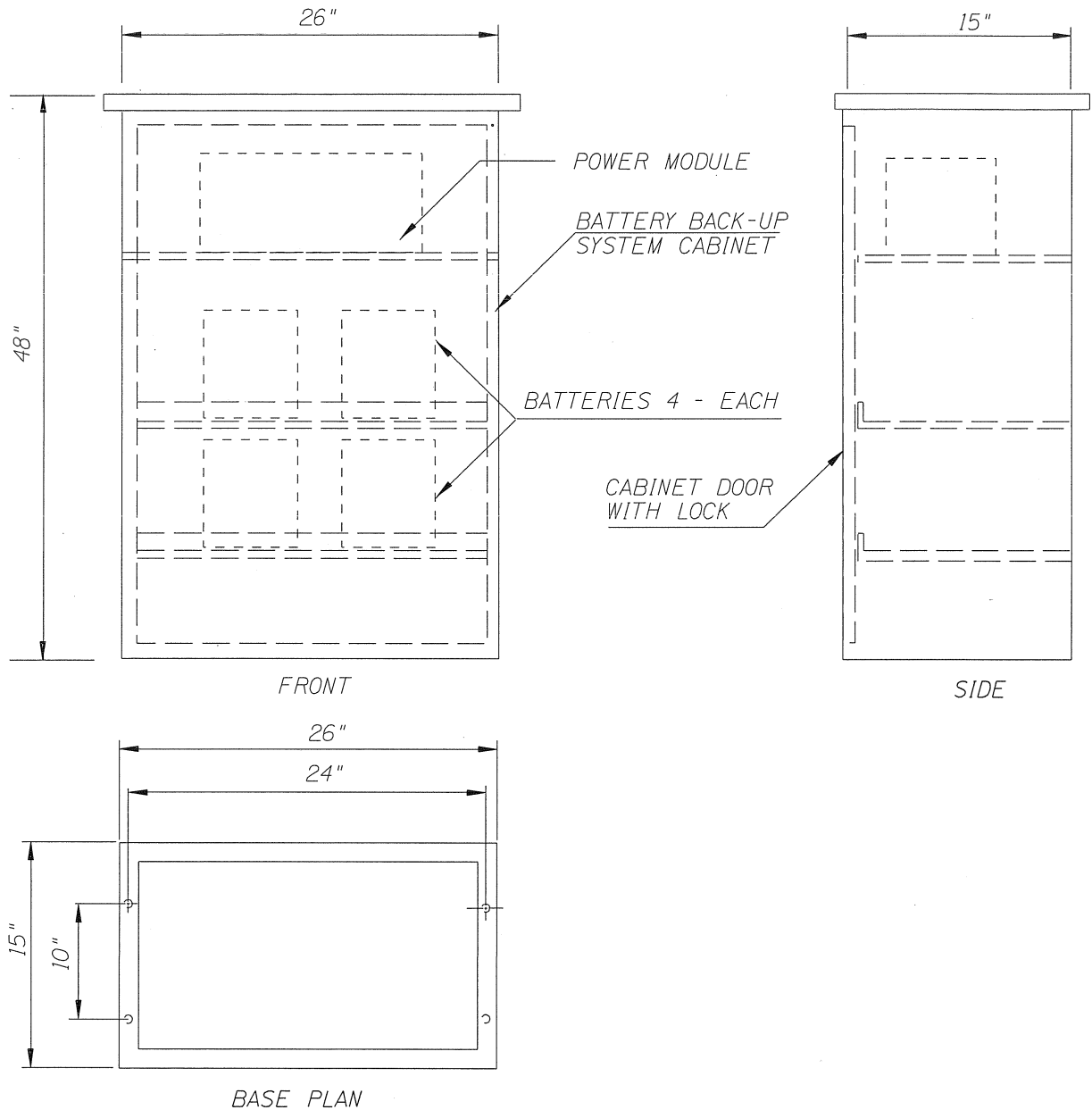
BASE PLAN

1. FOR CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. EXTERIOR SHALL BE 12 GA. H. D. GALVANIZED STEEL, THE INTERIOR SHALL BE 14 GA. COLD ROLLED STEEL. ALL WELDS SHALL BE ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
3. CONSTRUCTION SHALL BE NEMA 3R AND 12. RAIN-TIGHT AND DUST-TIGHT.
4. ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
5. NUTS, BOLTS AND SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
6. CONTROL WIRING SHALL BE MARKED AT BOTH ENDS WITH PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM SHALL BE SUPPLIED WITH ENCLOSURE.
8. THE ENCLOSURE SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.

'SP' ELECTRICAL SERVICE PEDESTAL



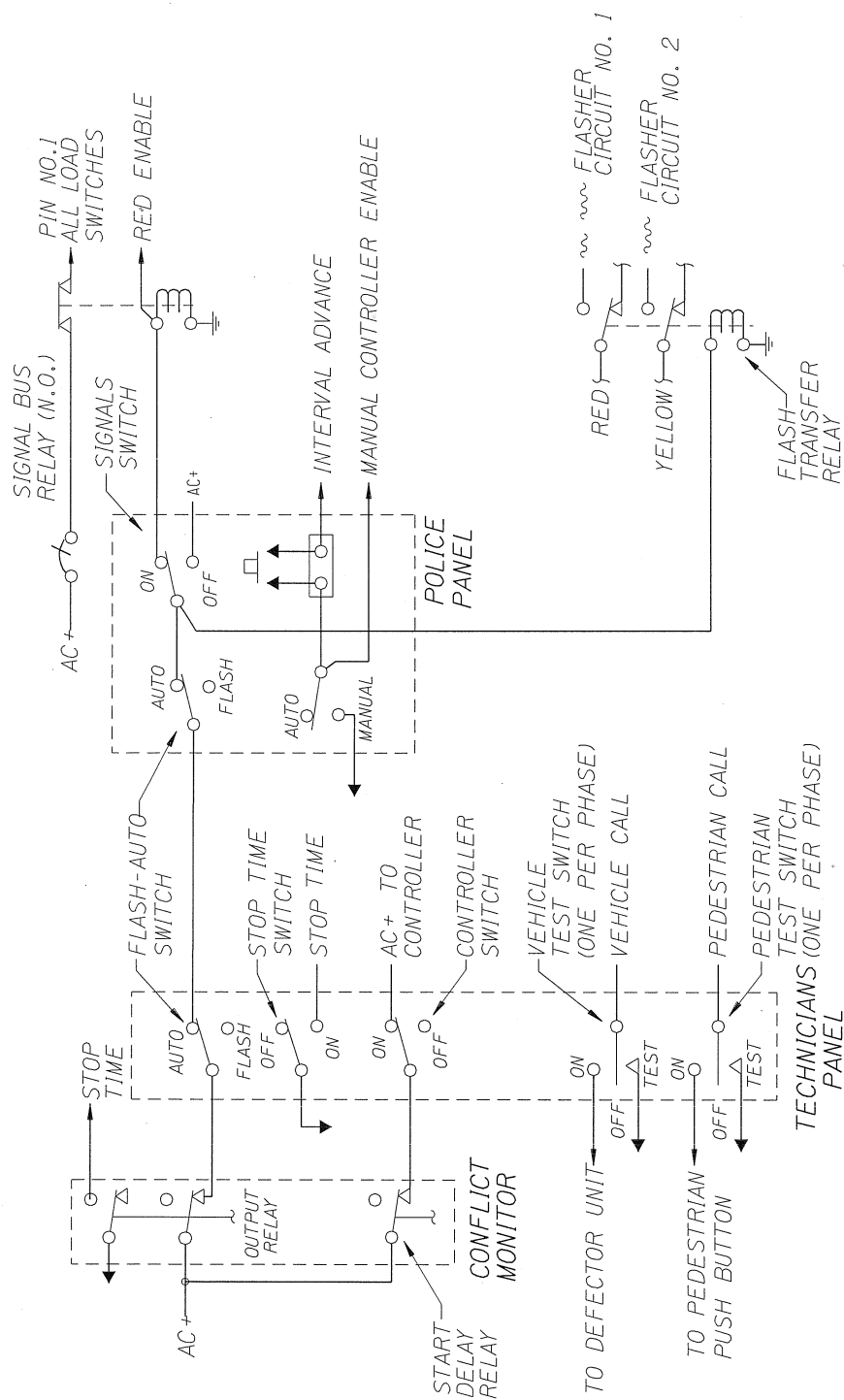
FLASHER TRANSFER CIRCUIT



NOTES:

1. FOR CONSTRUCTION SPECIFICATIONS, SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. CABINET SHALL BE NEMA 3, WEATHERPROOF WITH VENTILATION LOUVERS.
3. ALL CONSTRUCTION OF CABINET, DOOR AND HARDWARE SHALL BE ALUMINUM.
4. FINISH SHALL BE GRAY, BAKED-ON ALKAL ENAMEL.
5. ANCHOR BOLTS, WASHERS AND NUTS SHALL CONFORM TO THE STRENGTH REQUIREMENTS OF ASTM A-325.

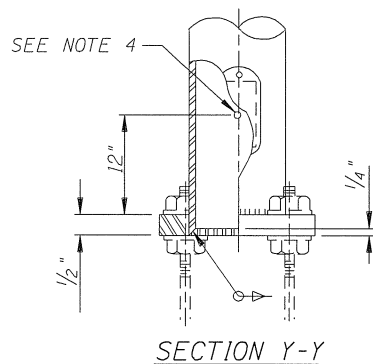
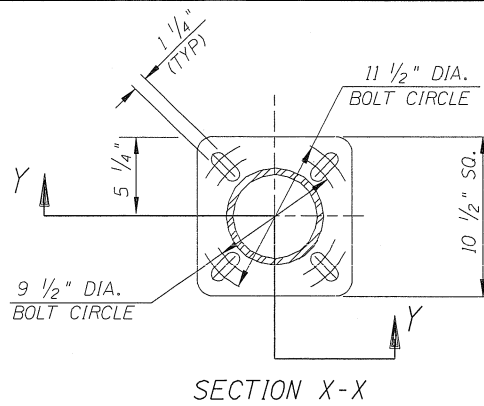
TRAFFIC SIGNAL BATTERY BACK-UP SYSTEM (BBS)



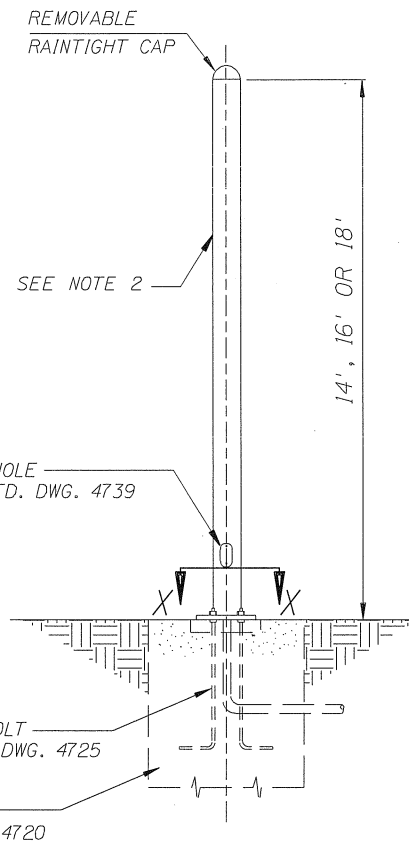
NOTES:

1. MOV OR RC NETWORK REQUIRED ACROSS RELAY COILS.
2. CIRCUIT SHOWN WITH POWER APPLIED.

CONTROLLER CABINET WIRING SCHEMATIC



BASE PLATE DETAILS

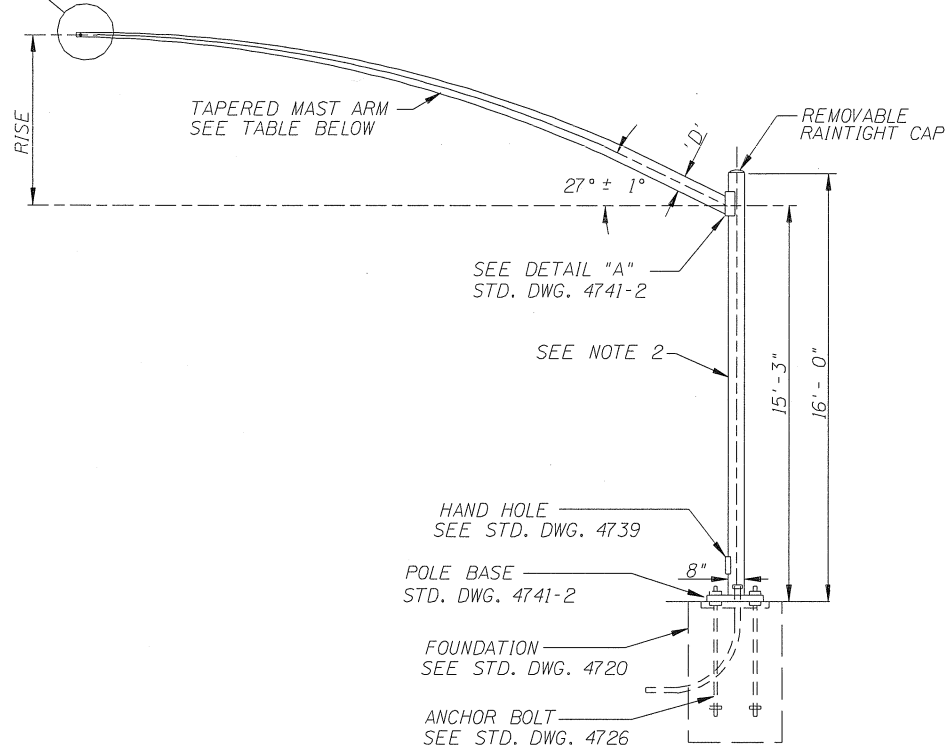


NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE A STANDARD 4" GALVANIZED PIPE, SCHEDULE 40, (0.237" WALL THICKNESS).
3. THE POLE BASE PLATE SHALL BE 1/2" STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A36.
4. A 1/4" TAPPED HOLE FOR A GROUND CONNECTION SHALL BE PROVIDED.

TYPE 'A' POLE

SEE DETAIL "B"
STD. DWG. 4741-2

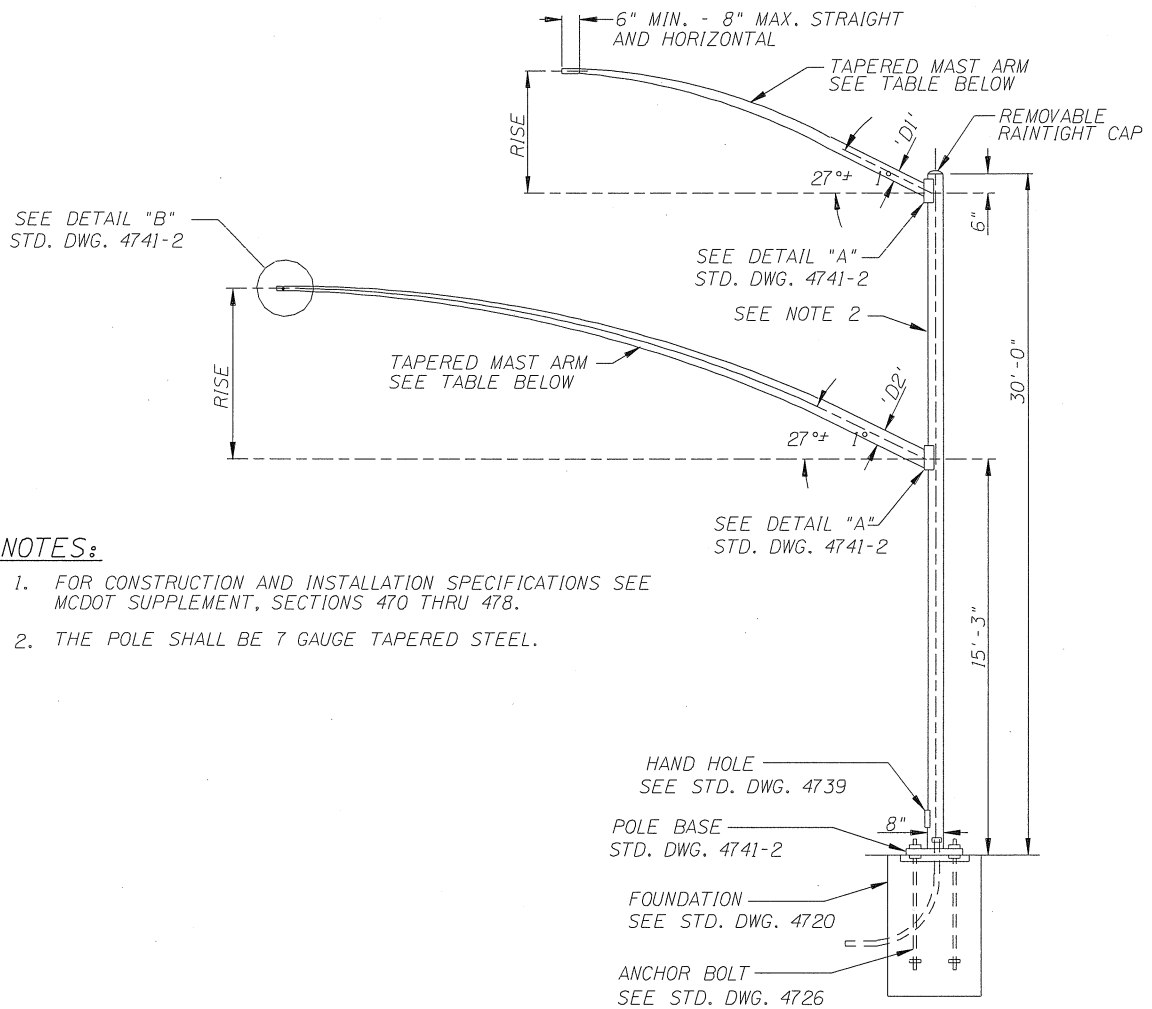


NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE 7 GAUGE TAPERED STEEL.

MAST ARM INFORMATION					
Length	Rise	Ga.	"D" Min.	Ga.	"D" Min.
12'	4'-3"	11	4 $\frac{15}{16}$ "	10	4 $\frac{5}{16}$ "
15'	4'-9"	11	5 $\frac{5}{16}$ "	10	4 $\frac{3}{4}$ "
18'	5'-9"	11	5 $\frac{13}{16}$ "	10	5 $\frac{3}{16}$ "
20'	5'-9"	7	5 $\frac{1}{4}$ "	7	5 $\frac{1}{4}$ "

TYPE 'E' POLE

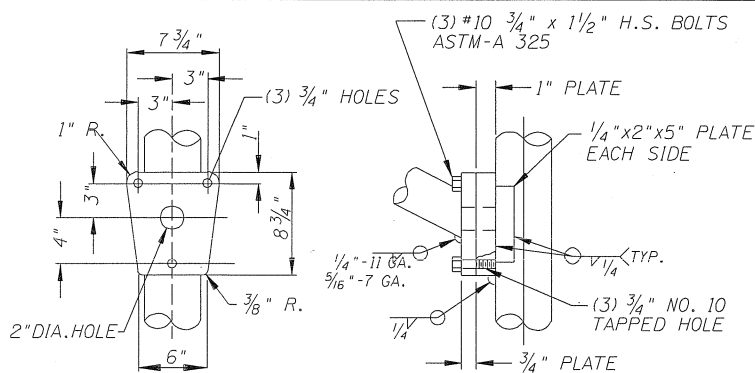


NOTES:

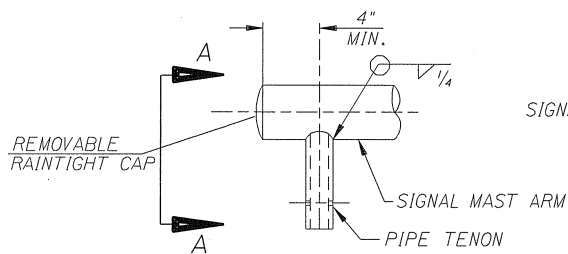
1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE 7 GAUGE TAPERED STEEL.

MAST ARM INFORMATION							
Length	Rise	Ga.	"D1" Min.	"D2" Min.	Ga.	"D1 & D2" Min.	
6'	2'-0"	11	3 1/4"	---	10	3 3/8"	
8'	2'-6"	11	3 1/2"	---	10	3 5/8"	
10'	3'-4"	11	3 13/16"	---	10	3 7/8"	
12'	4'-3"	11	4 1/16"	4 15/16"	10	4 5/16"	
15'	4'-9"	11	4 1/4"	5 5/16"	10	4 3/4"	
18'	5'-9"	11	5 3/4"	5 13/16"	10	5 3/16"	
20'	5'-9"	7	5 1/4"	5 1/4"	7	5 1/4"	

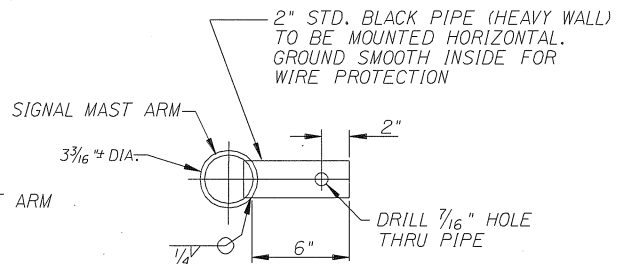
TYPE 'F' POLE



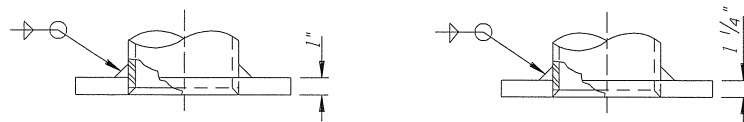
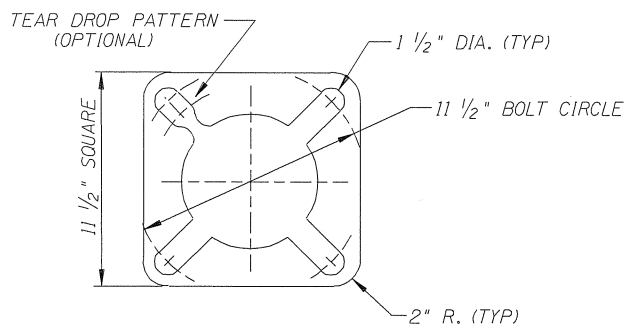
DETAIL "A"



DETAIL "B"



SECTION A-A

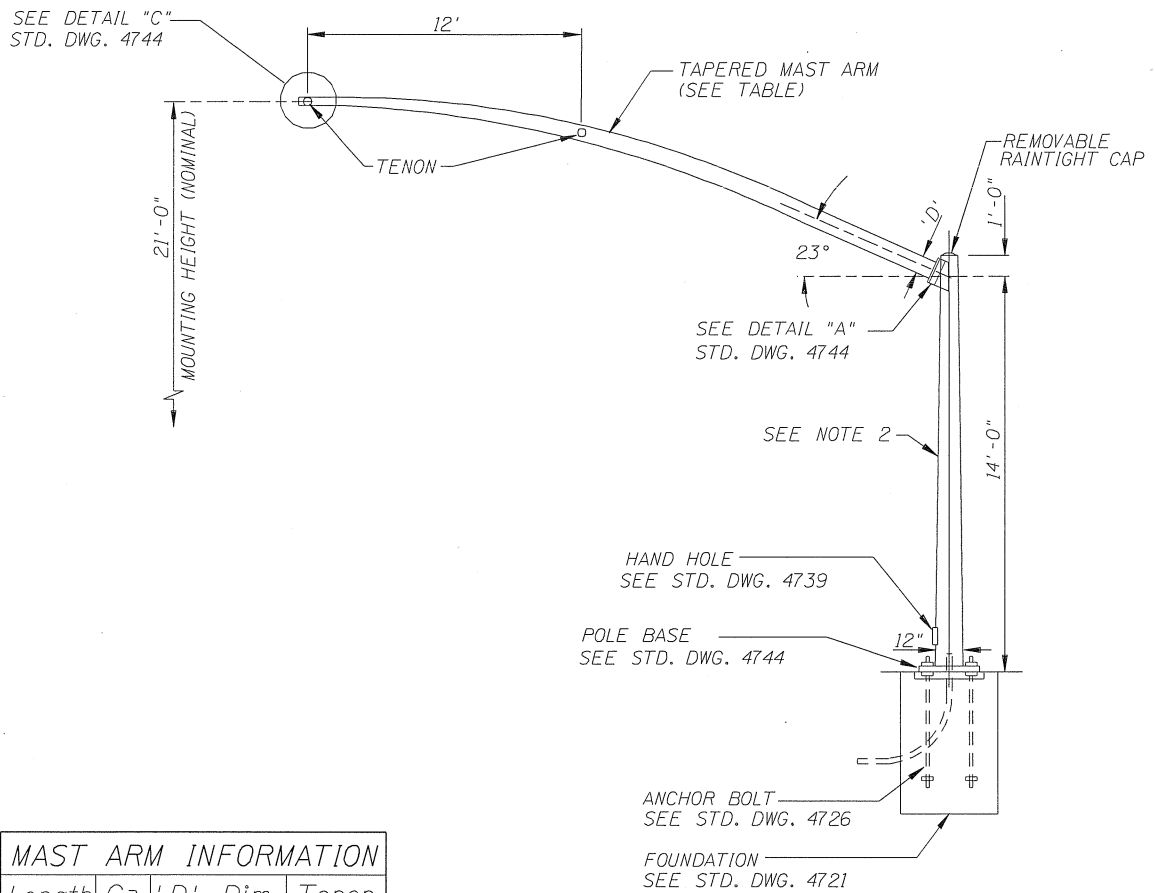


'E' POLE

'F' POLE

POLE BASE DETAIL

'E' & 'F' POLE DETAILS

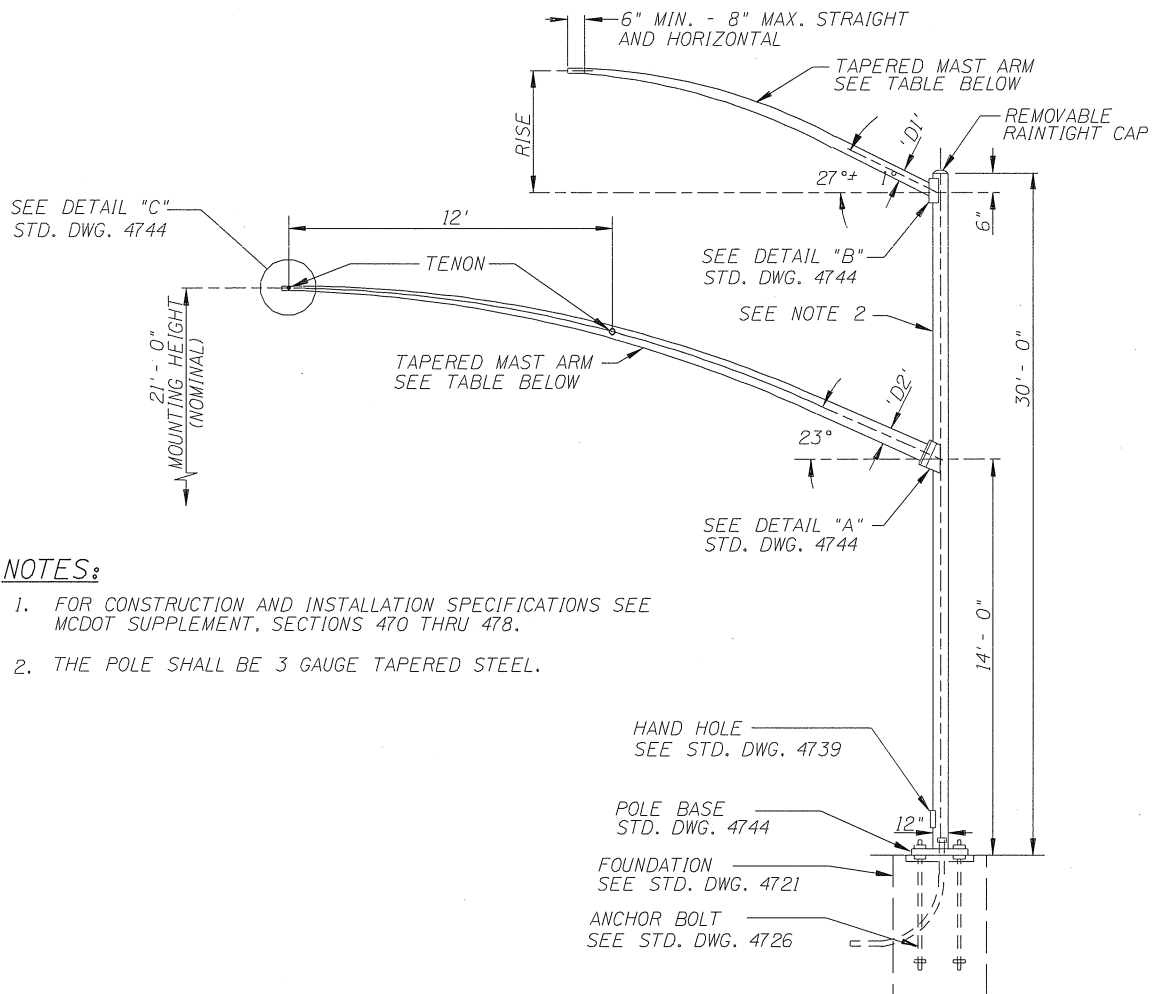


MAST ARM INFORMATION			
Length	Ga.	'D' Dim.	Tenon
25'	7	7"	2
30'	7	8"	2
35'	3	8 ¹¹ / ₁₆ "	2
40'	3	9 ³ / ₈ "	2

NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE 3 GAUGE TAPERED STEEL.

TYPE 'J' POLE

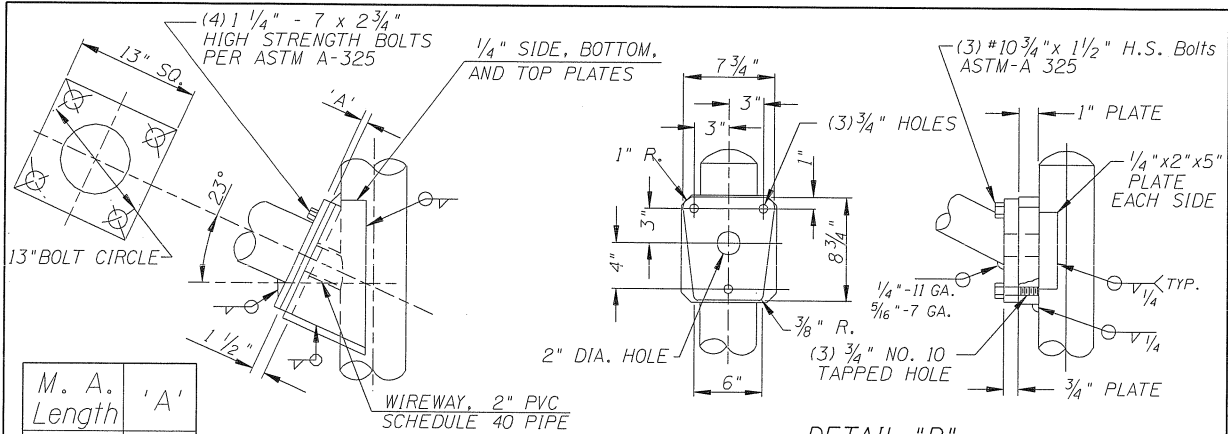


NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE 3 GAUGE TAPERED STEEL.

MAST ARM INFORMATION							
	Lum. M.A.		'D1' Min.		'D2' Min.	Tenon	
	Length	Rise	Gauge	10 Ga.	11 Ga.		
Signal Lum.	15'	4'-9"	10 or 11	4 1/4"	4 3/4"	----	----
	20'	5'-9"	7	5 1/4"	5 1/4"	----	----
	25'	----	7	----	----	7"	2
	30'	----	7	----	----	8"	2
	35'	----	3	----	----	8 11/16"	2
	40'	----	3	----	----	9 3/8"	2

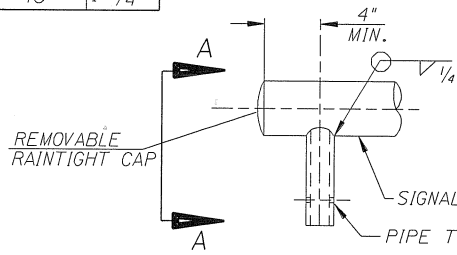
TYPE 'Q' POLE



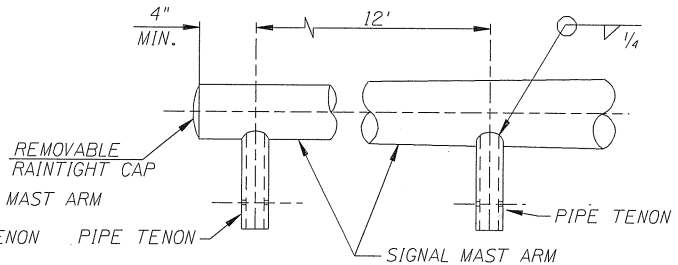
M. A. Length	'A'
25'	1"
30'	1"
35'	1 1/4"
40'	1 1/4"

DETAIL "A"

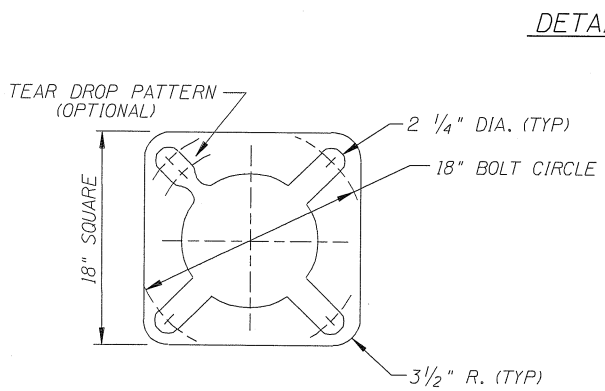
DETAIL "B"



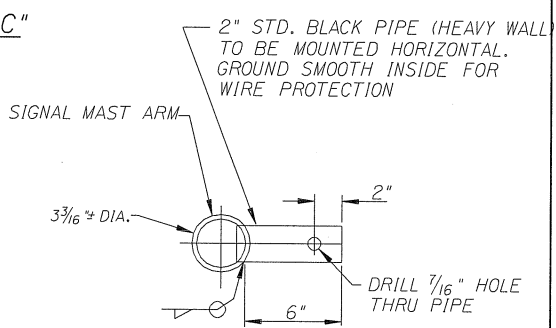
SINGLE TENON



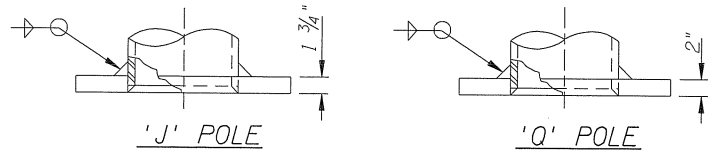
DOUBLE TENON



DETAIL "C"

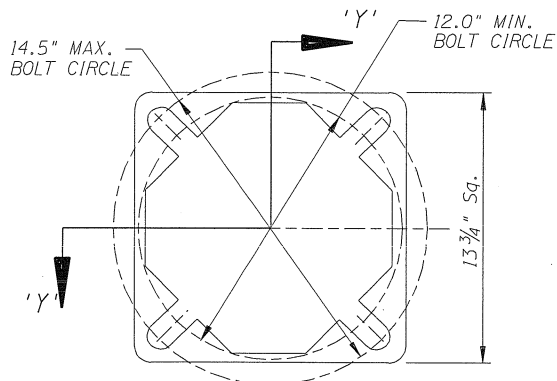


SECTION A-A

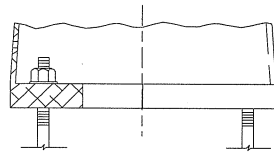


POLE BASE DETAIL

'J' & 'Q' POLE DETAILS



SECTION 'X - X'

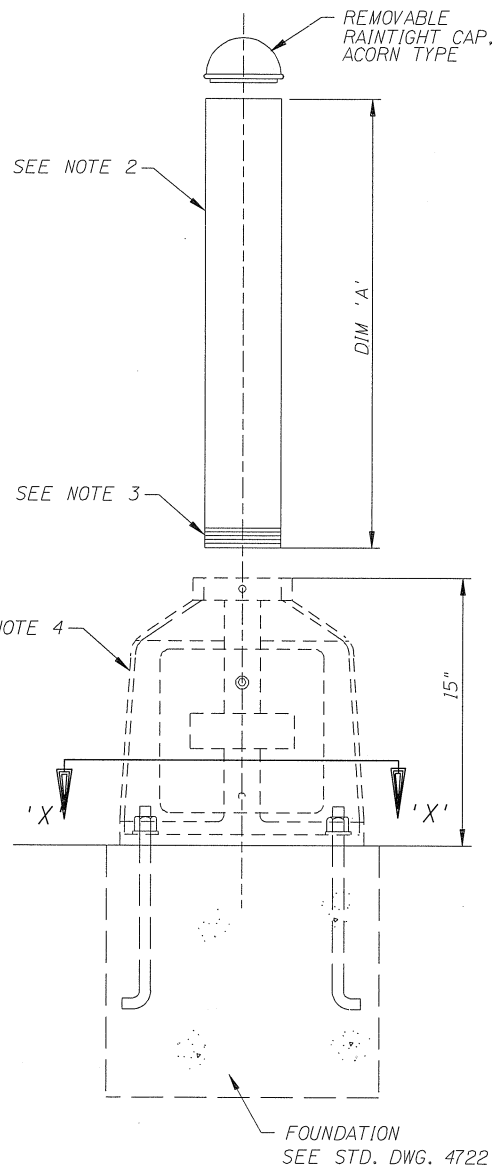


SECTION 'Y - Y'

NOTES:

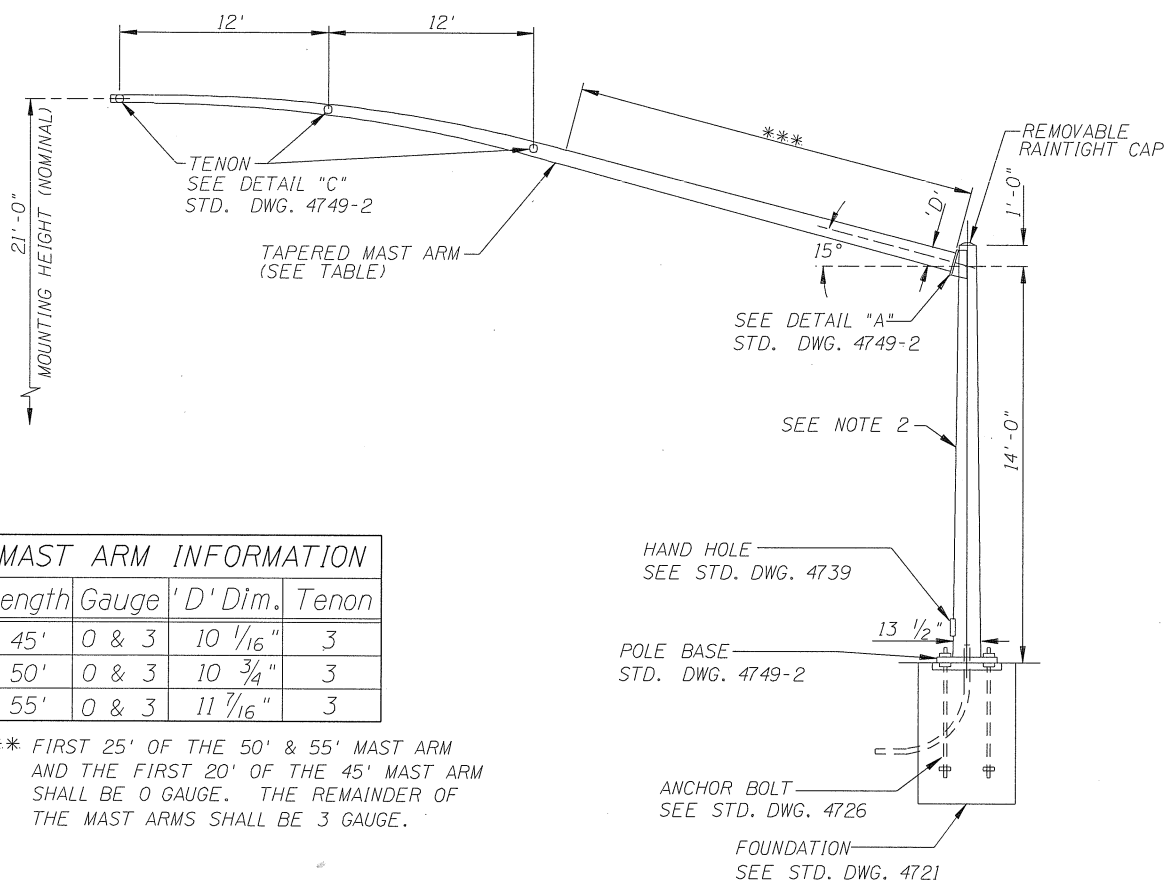
1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTION 470 THRU 478.
2. THE POLE SHAFT SHALL BE 4 1/2" O.D. x .237 WALL (SCHEDULE 40) 6063-T6 ALUMINUM, SPUN FINISH.
3. 4 INCH N.P.T. AT 8 THREADS/INCH.
4. FOR SQUARE BASE PEDESTAL SEE TRAFFIC SIGNAL STANDARD DRAWING 4751.

POLE	'A'	ANCHOR BOLT
SB-6	6'	3/4" x 16" x 4"
SB-20	20"	3/4" x 16" x 4"



TYPE 'SB' POLE

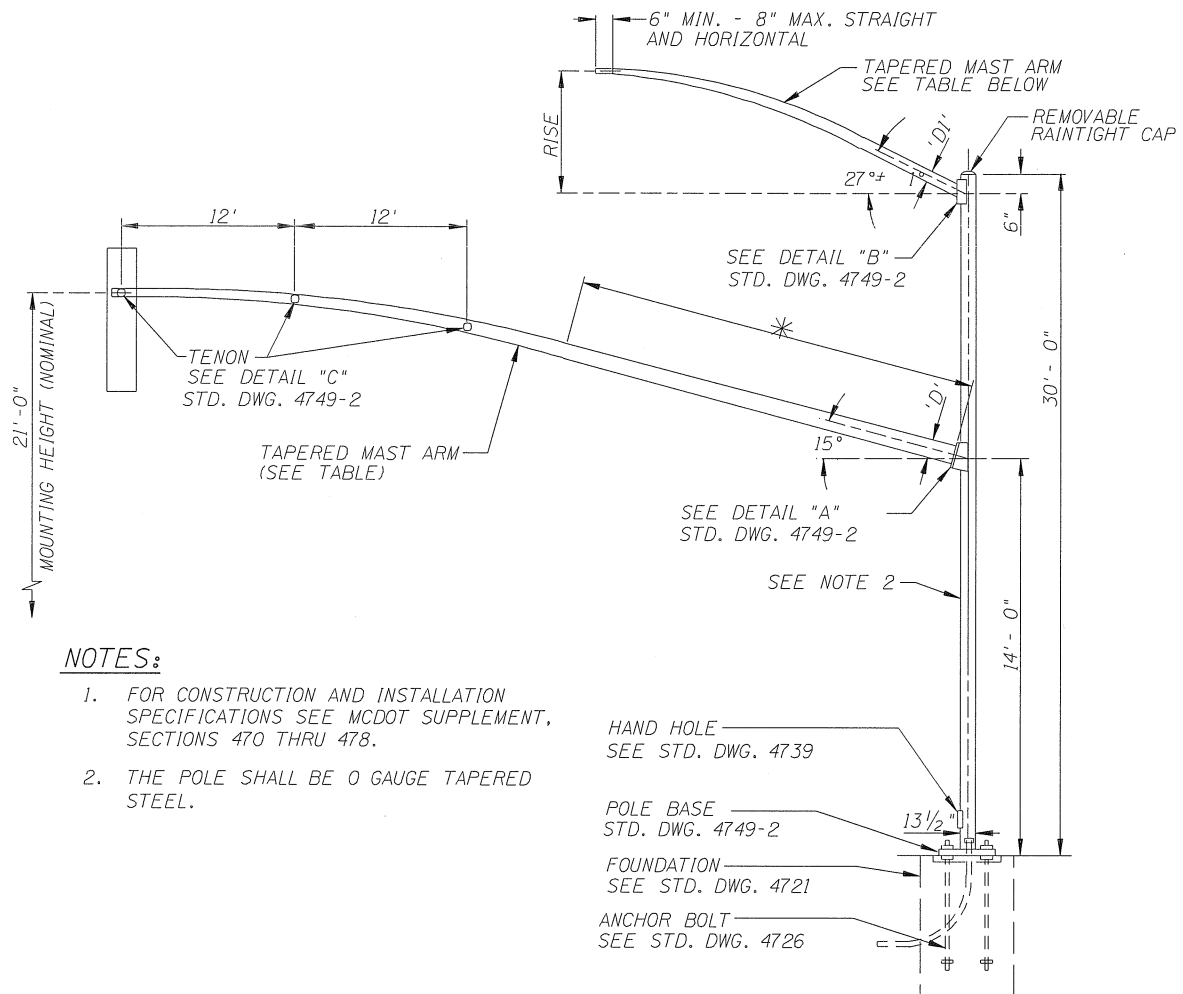
ITS INSTALLATION ONLY



NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE 0 GAUGE TAPERED STEEL.

TYPE 'K' POLE



NOTES:

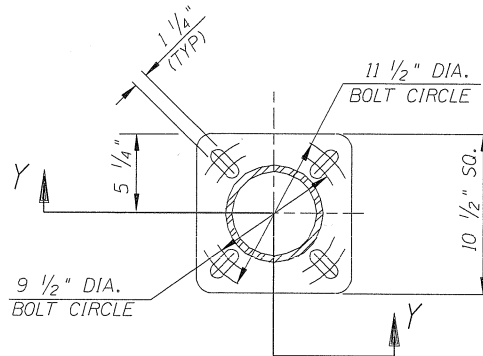
1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE 0 GAUGE TAPERED STEEL.

MAST ARM INFORMATION

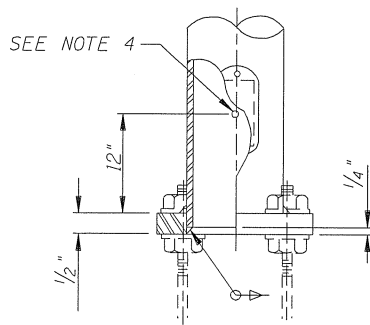
	Length	Lum.M.A. Rise	Gauge	'D1' Min.	'D2' Min.	Tenon
Signal Lum.	20'	5'-9"	7	5 1/4"	----	----
					----	----
	45'	----	0 & 3 *	----	10 1/16"	3
	50'	----	0 & 3 *	----	10 3/4"	3
	55'	----	0 & 3 *	----	11 7/16"	3

* FIRST 25' OF THE 50' & 55' MAST ARM AND THE FIRST 20' OF THE 45' MAST ARM SHALL BE 0 GAUGE. THE REMAINDER OF THE MAST ARM SHALL BE 3 GAUGE.

TYPE 'R' POLE

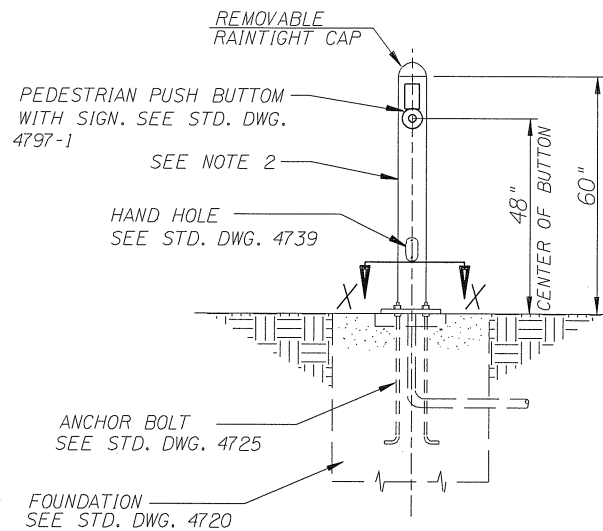


SECTION X-X



SECTION Y-Y

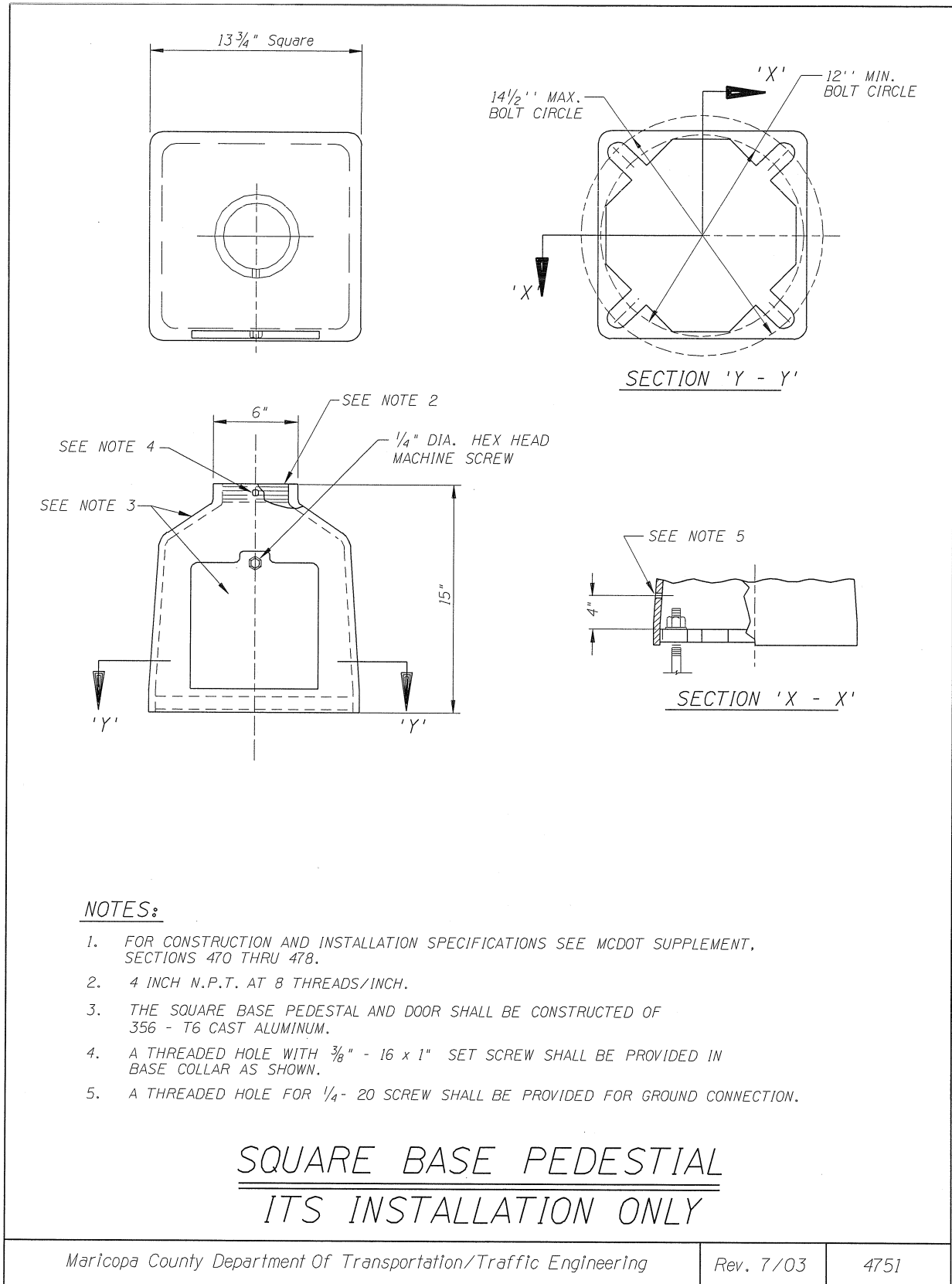
BASE PLATE DETAILS

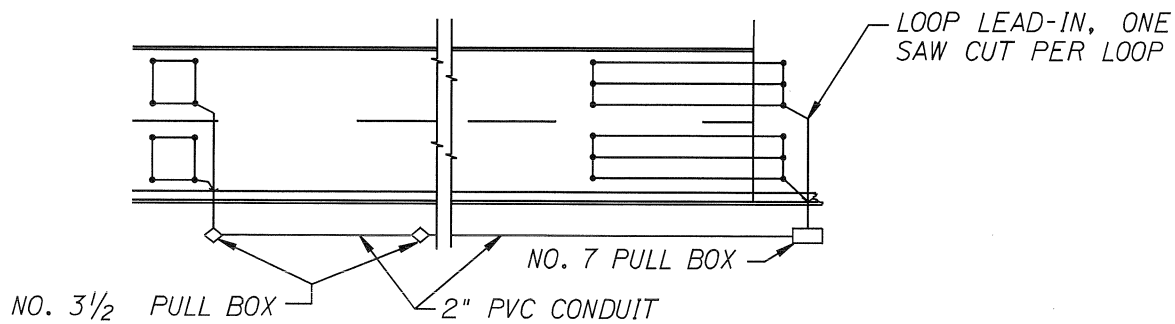


NOTES:

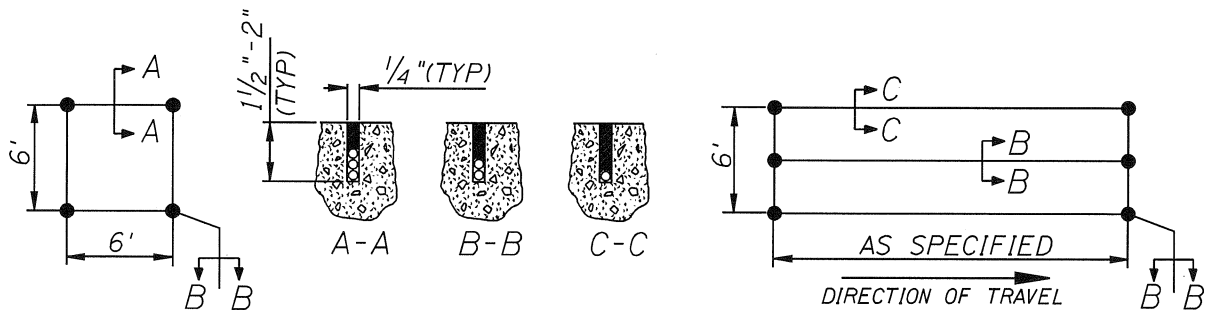
1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. THE POLE SHALL BE A STANDARD 4" GALVANIZED PIPE, SCHEDULE 40, (0.237" WALL THICKNESS).
3. THE POLE BASE PLATE SHALL BE 1/2" STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A36.
4. A 1/4" TAPPED HOLE FOR A GROUND CONNECTION SHALL BE PROVIDED.

TYPE 'PB' POLE

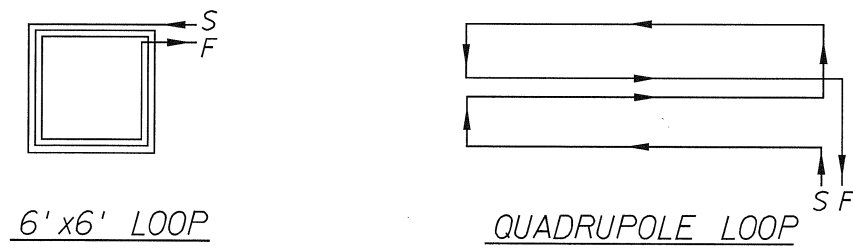




TYPICAL LOOP LAYOUT



SAW CUT DETAILS



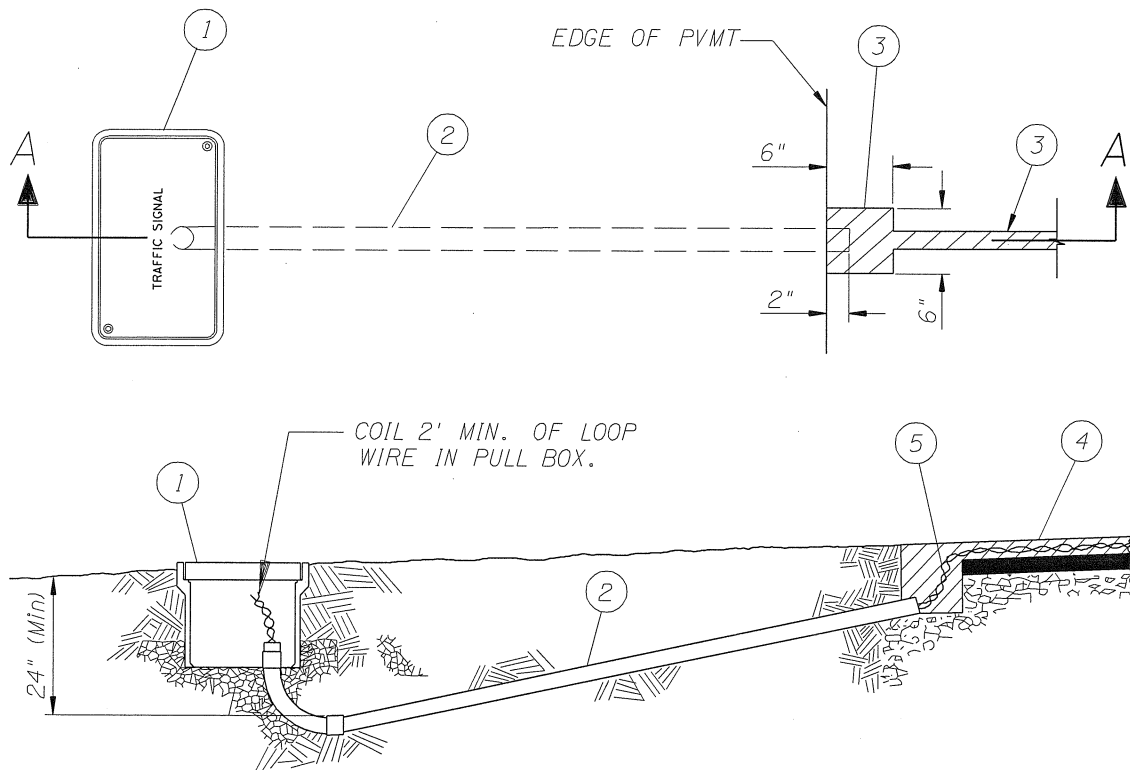
LOOP WIRING DETAILS

NOTES:

1. FOR MATERIALS AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. WIRE QUADRUPOLE LOOP IN 1-2-1 CONFIGURATION UNLESS OTHERWISE SPECIFIED.
3. 6'x 6' LOOPS TO BE 3-TURN UNLESS OTHERWISE SPECIFIED.
4. LOCATE LOOPS AND PULL BOXES PER TRAFFIC SIGNAL PLANS.
5. CORE DRILL AT ALL TURN POINTS, WITH A 2 1/2" DIAMETER AND AT A FULL DEPTH OF 2 1/2". OBTAIN CONTINUOUS SAW CUT AT FULL DEPTH THROUGH ALL TURN POINTS.
6. IDENTIFY START (S) AND FINISH (F) WIRE IN PULL BOX FOR EACH LOOP.
7. FOR INSTALLATION OF PULL BOXES AND LEAD-INS FOR LOOPS SEE TRAFFIC SIGNAL STANDARD DRAWINGS 4758 AND 4759.

LOOP INSTALLATION DETAILS

ITEM	QTY.	DESCRIPTION
1	1	PULL BOX (SEE STD. DWG. 4711)
2	-	2" PVC ELECTRICAL CONDUIT, SCH. 40
3	-	SAW CUT FOR LOOP DETECTION SENSORS
4	-	LOOP SEALANT
5	-	LOOP DETECTION WIRES



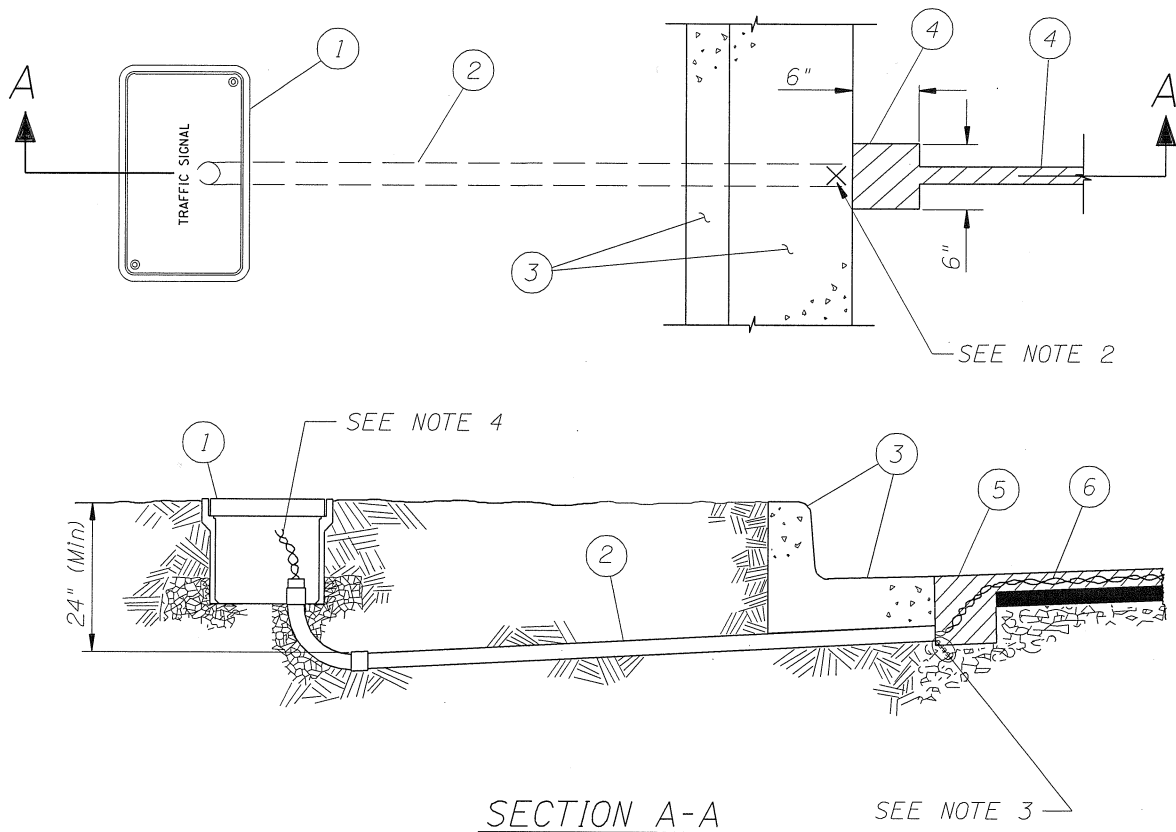
SECTION A-A

NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.

CONDUIT STUB-OUT DETAIL WITHOUT CURB & GUTTER

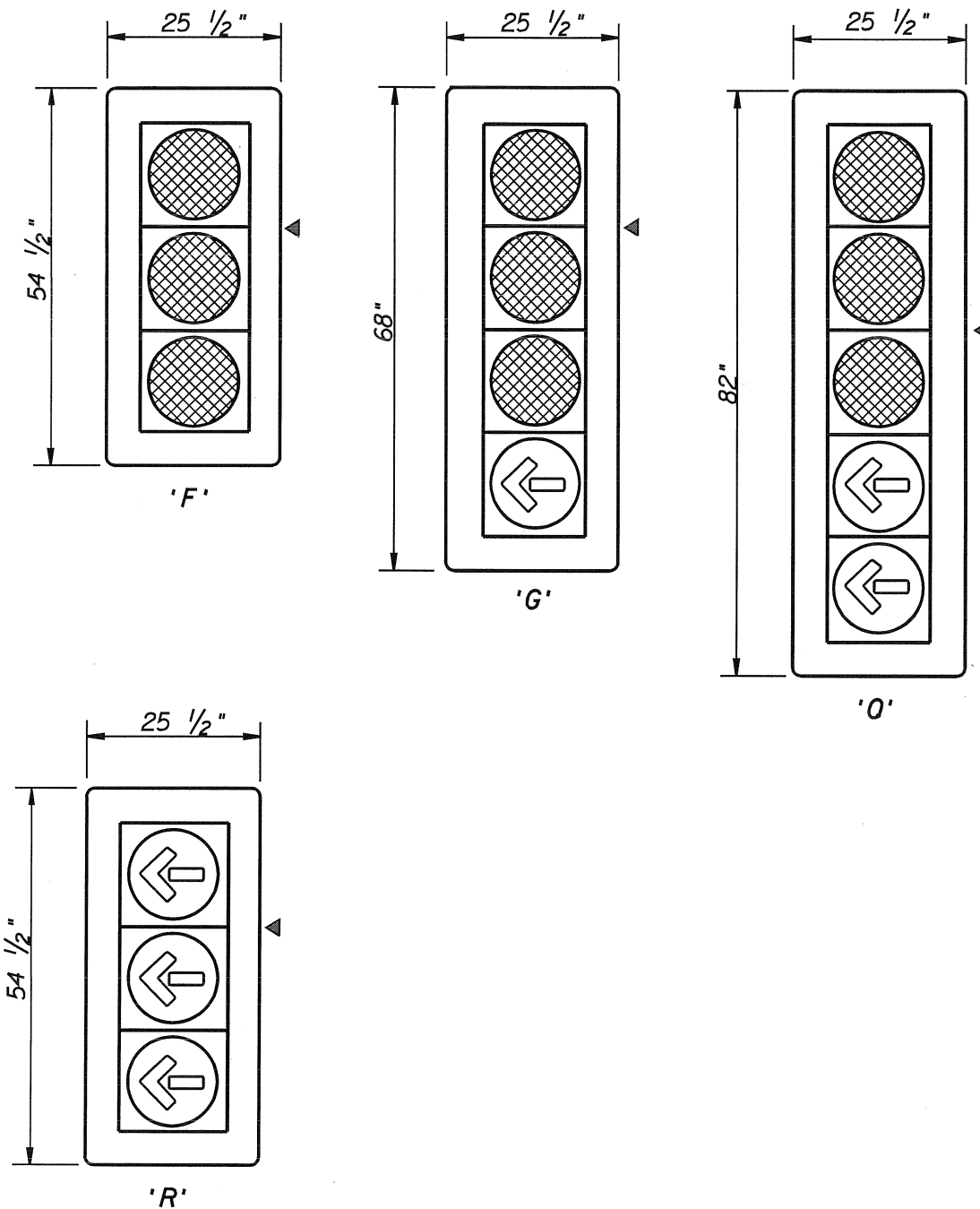
ITEM	QTY.	DESCRIPTION
1	1	PULL BOX (SEE STD. DWG. 4711)
2	-	2" PVC ELECTRICAL CONDUIT, SCH. 40
3	-	CURB & GUTTER
4	-	SAW CUT FOR LOOP DETECTION SENSORS
5	-	LOOP SEALANT
6	-	LOOP DETECTION WIRES (SEE NOTE 4)



NOTES:

1. FOR CONSTRUCTION AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. CHISEL 'X' MARK ON GUTTER TO LOCATE END OF GUTTER.
3. END OF PVC TO BE CUT FLUSH WITH GUTTER.
4. COIL 2' MIN. OF LOOP WIRE IN PULL BOX.

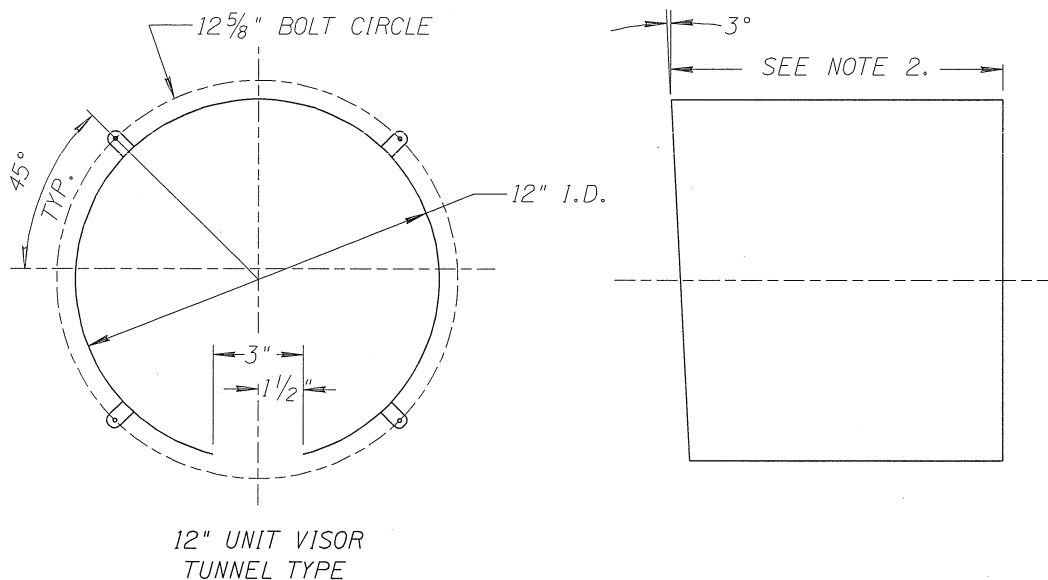
CONDUIT STUB-OUT DETAIL
WITH CURB & GUTTER



NOTES:

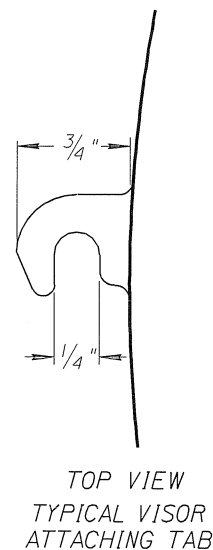
1. ALL DIMENSIONS SHOWN ARE NOMINAL.
2. ◄ DENOTES LOCATION OF ELEVATOR PLUMBIZER FOR MAST ARM INSTALLATIONS.
3. ALL SIGNAL ARRANGEMENTS SHALL BE FURNISHED WITH LOUVERED BACKPLATES.
4. ALL INDICATIONS AS PER THE MCDOT SUPPLEMENT, SECTION 470-478.

STANDARD SIGNAL FACES

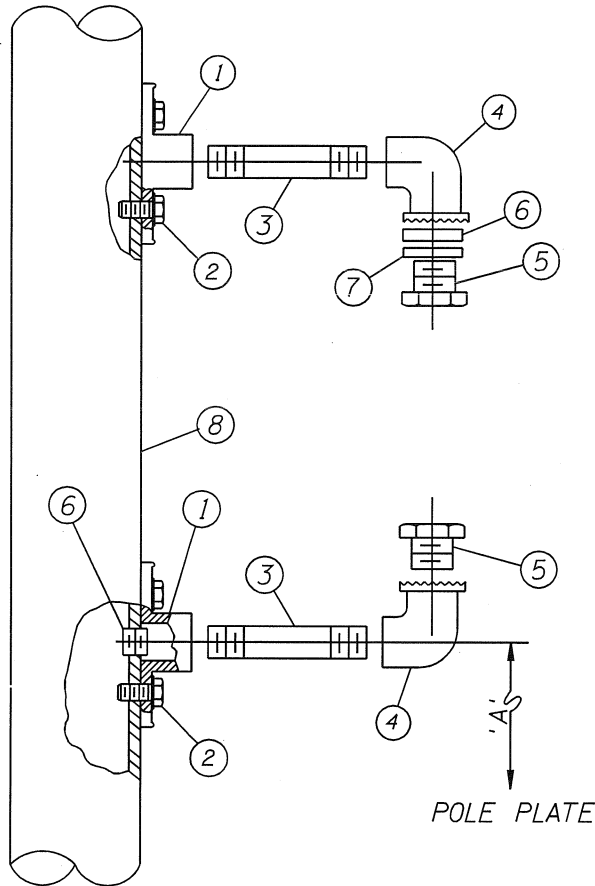


NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. VISORS SHALL BE 12" LONG, UNLESS SPECIFIED OTHERWISE.
3. THE VISOR SHALL BE ATTACHED TO THE SIGNAL HOUSING EITHER WITH TABS AS SHOWN OR WITH THE VISOR PROJECTING INSIDE THE SIGNAL HOUSING ALONG THE EDGE OF THE SIGNAL LENS AND SECURED IN PLACE WITH FOUR SCREWS TAPPED INTO THE SIGNAL HOUSING.



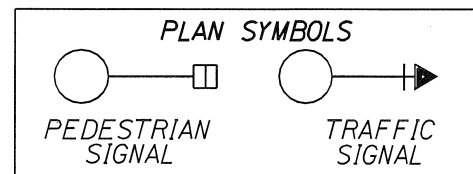
SIGNAL HEAD VISOR



POLE DRILLING INFORMATION

ITEM	DIM. 'A'
STANDARD SIGNAL	118"
PEDESTRIAN SIGNAL	87"

DIM. 'A' IS MEASURED FROM TOP OF
POLE BASE TO CENTER OF BOTTOM
POLE PLATE



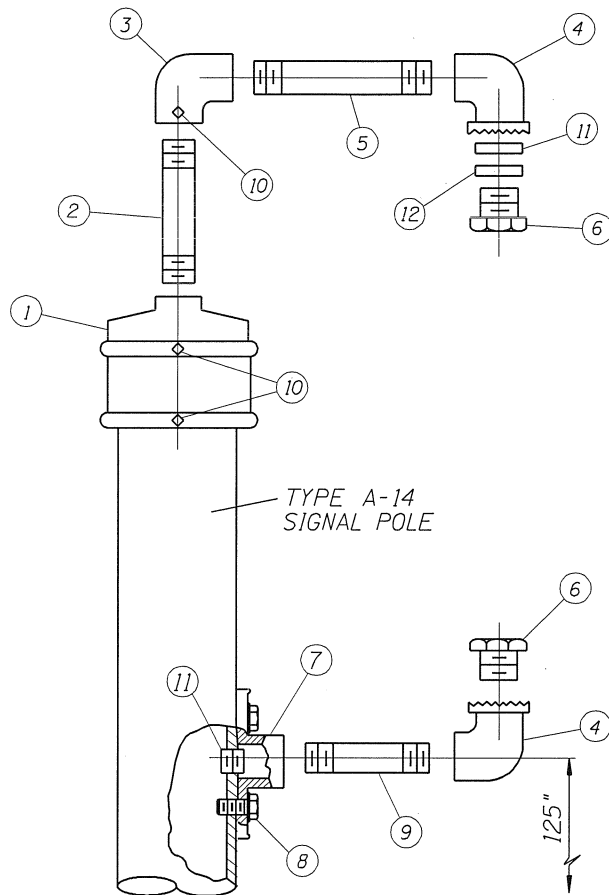
SIDE MOUNT DETAIL

ITEM	QTY.	DESCRIPTION
1	1	POLE PLATE (See Std. Detail 4785)
2	4	BOLTS- $\frac{1}{2}$ " x 20 x $1\frac{1}{2}$ "
3	1	$1\frac{1}{2}$ " x 8" NIPPLE
4	2	$1\frac{1}{2}$ " ELBOW (See Std. Detail 4788)
5	2	$1\frac{1}{2}$ " LOCK NIPPLE
6	1	NEOPRENE WASHER
7	1	WASHER, GALVANIZED
8	-	SIGNAL POLE SHAFT
9	1	$\frac{3}{4}$ " CHASE NIPPLE (INSULATING BUSHING)

NOTES:

1. SEE MCDOT STANDARD DETAIL 4773, FOR SIGNAL HEAD COMBINATIONS.
2. SEE MCDOT STANDARD DETAIL 4785, FOR POLE PLATE DETAILS.

SIDE MOUNT (TYPE XI) ASSEMBLY (VEHICLE AND PEDESTRIAN)



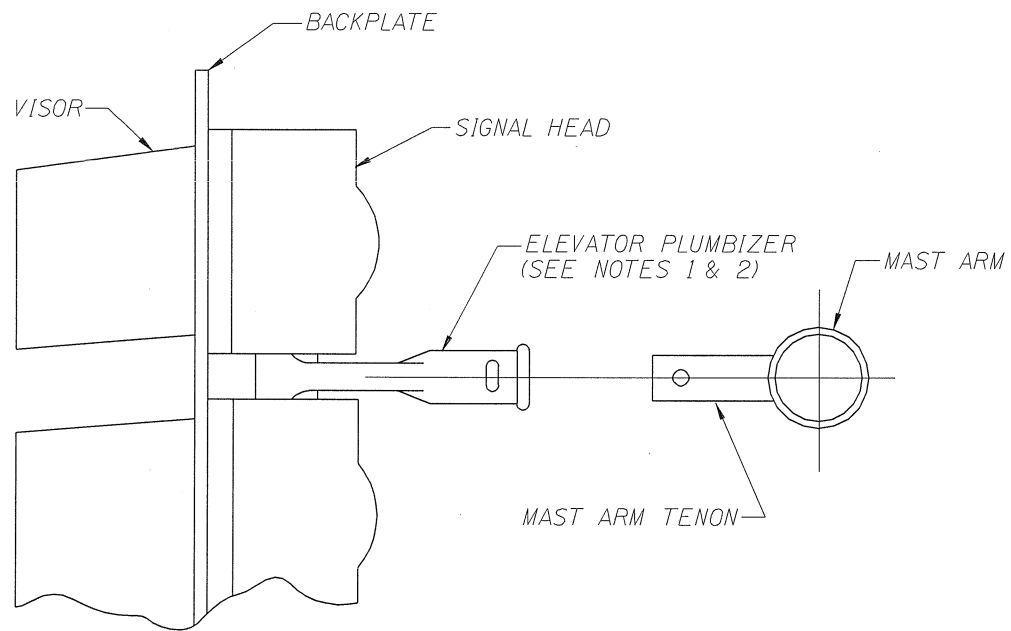
NOTE:

1. FIELD CUT NIPPLE (2) TO OBTAIN CORRECT SIGNAL HEAD MOUNTING HEIGHT. CUT NIPPLE (5) SUCH THAT THE SIGNAL HEAD IS PLUMB.
2. POLE TOP MOUNTING ASSEMBLY SHALL BE USED FOR TYPE 'Q' SIGNAL FACE ONLY. SEE MCDOT STANDARD DETAIL 4773 FOR SIGNAL HEAD COMBINATION.

MEASURED FROM TOP OF POLE
BASE TO CENTER OF BOTTOM POLE PLATE

ITEM	QTY.	DESCRIPTION
1	1	POST TOP MOUNT ADAPTER (4786)
2	1	1 1/2" NIPPLE
3	1	1 1/2" x 90° ELBOW
4	2	ELBOW (See Std. Dwg. 4788)
5	1	1 1/2" NIPPLE
6	2	1 1/2" LOCK NIPPLE
7	1	POLE PLATE (See Std. Dwg. 4785)
8	4	BOLT- 1/2" x 20 x 1 1/2"
9	1	1 1/2" x 8" NIPPLE
10	7	3/8" x 5/8" SQ. HD. SET SCREWS
11	2	NEOPRENE WASHER
12	1	WASHER, GALVANIZED

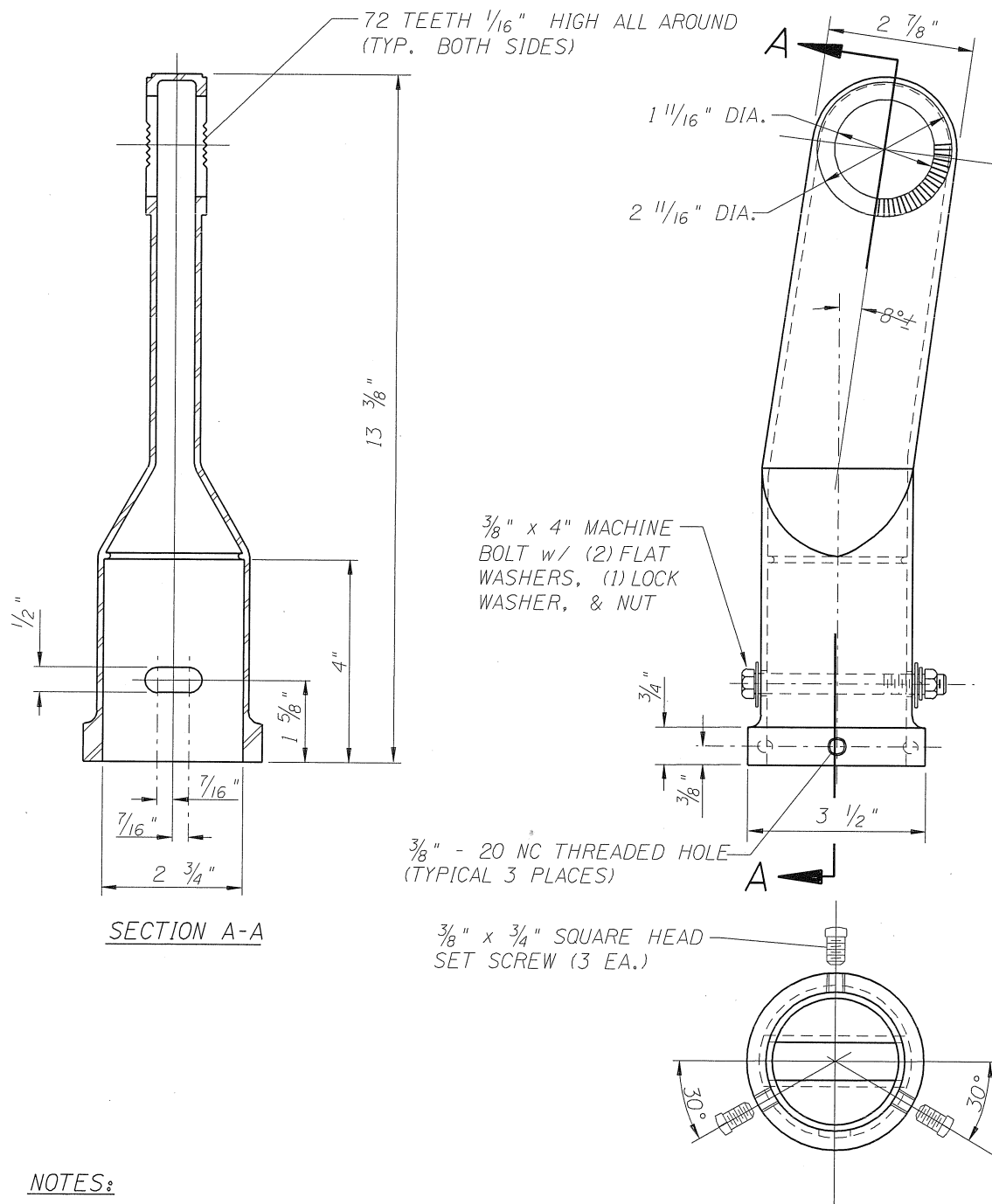
POLE TOP (TYPE III) MOUNTING ASSEMBLY



NOTES:

1. USE $\frac{3}{8}$ " x 4" BOLT WITH TWO (2) NUTS AND TWO (2) WASHERS (SUPPLIED WITH ELEVATOR PLUMBIZER) TO ATTACH SIGNAL HEAD. FOR PLUMBIZER SEE STANDARD DRAWING 4778-2.
2. FOR LOCATION OF ELEVATOR PLUMBIZER FOR VARIOUS SIGNAL HEAD COMBINATIONS, SEE TRAFFIC SIGNAL STANDARD DRAWING 4773.

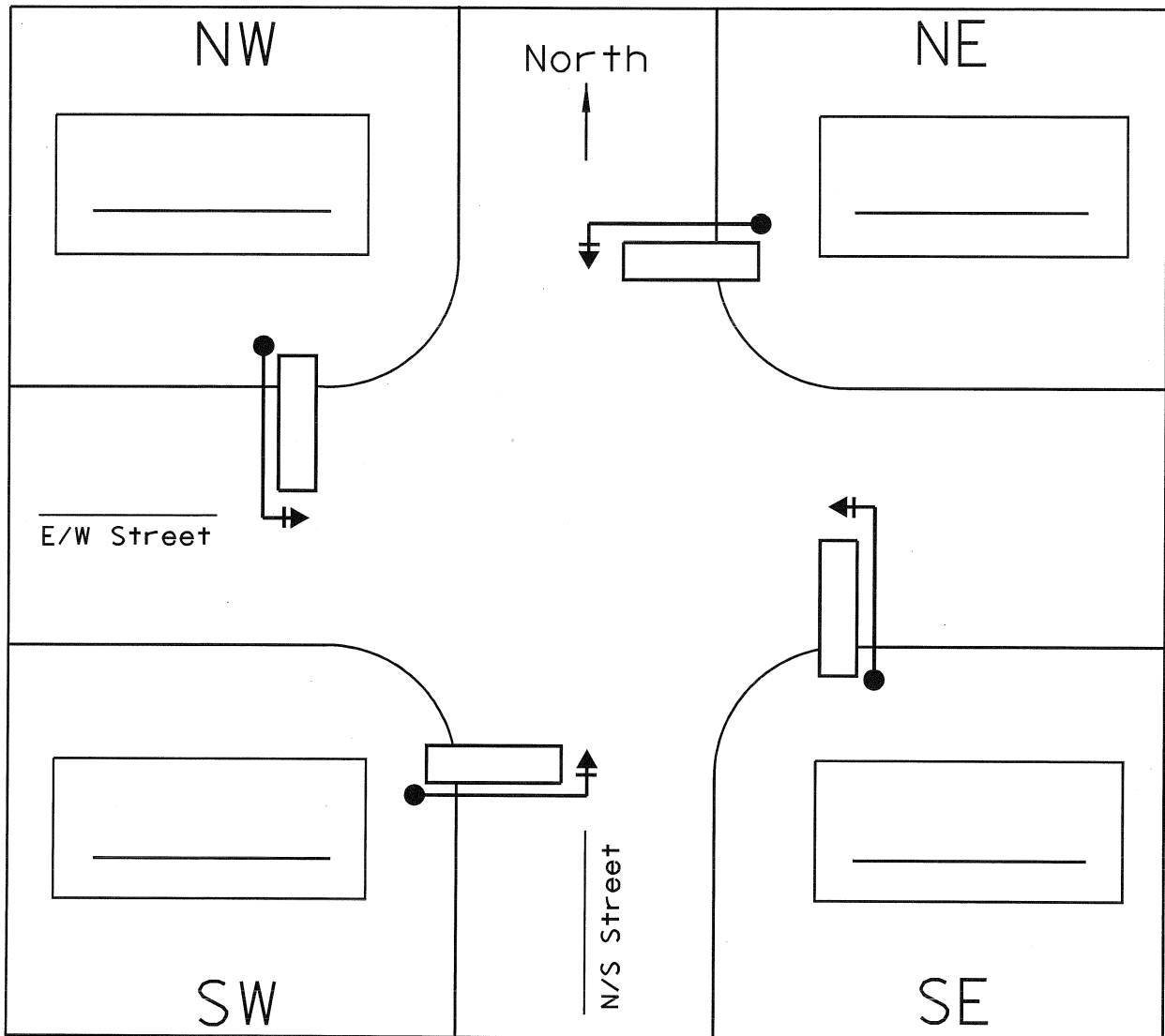
MAST ARM SIGNAL HEAD MOUNT (TYPE II)



NOTES:

1. MATERIAL TO BE BRONZE OR ALUMINUM
2. FOR CONSTRUCTION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
3. PLUMBIZER TO BE PAINTED A FLAT BLACK

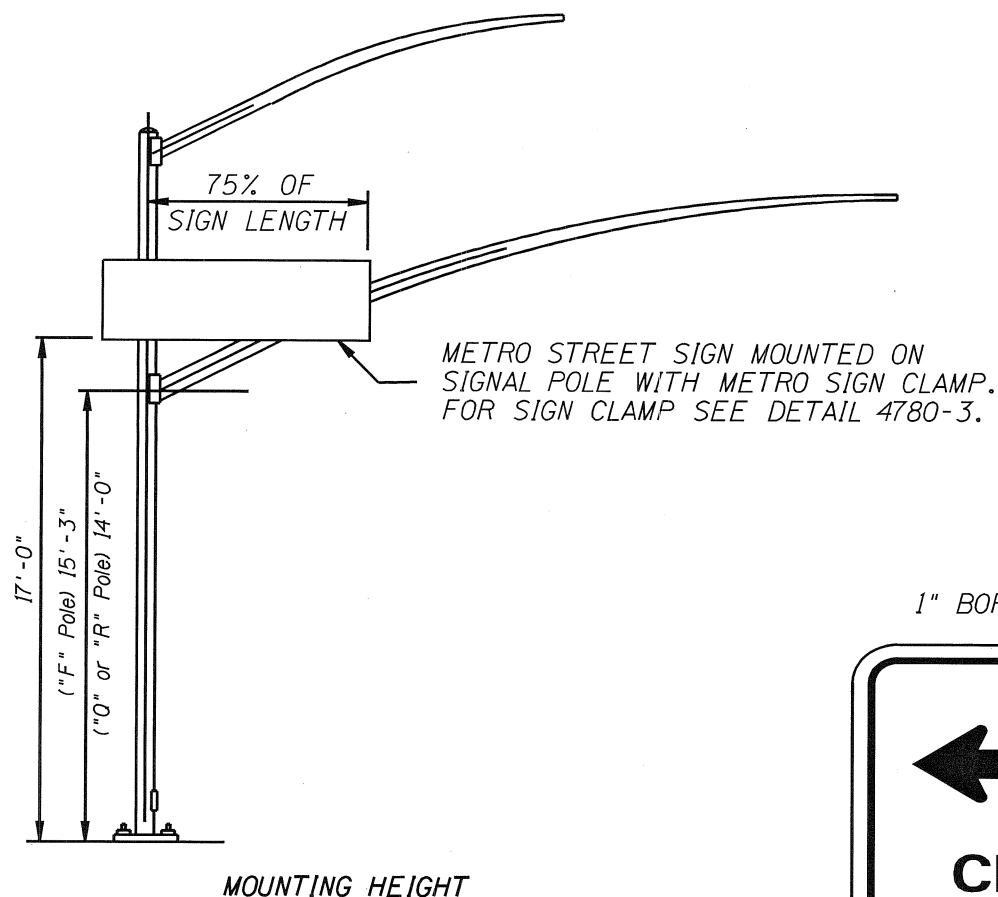
ELEVATOR PLUMBIZER DETAIL



NOTES:

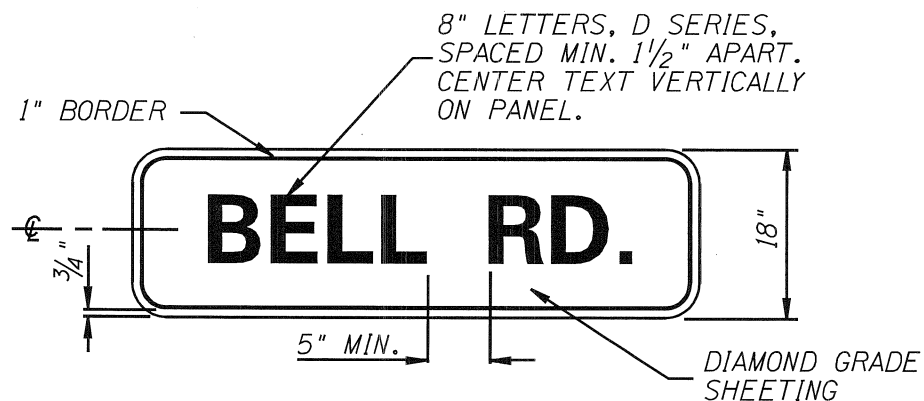
1. NON-ILLUMINATED METRO STREET NAME SIGNS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MCDOT SUPPLEMENT, SECTION 465, MCDOT TRAFFIC SIGN MANUAL, SIGNAL AND SIGNING PLANS.
2. SEE MCDOT STD. DETAILS 4780-2 AND 4780-3.
3. SEE PROJECT PLANS AND SPECIAL PROVISIONS FOR INTERNALLY-ILLUMINATED METRO STREET NAME SIGNS

METRO STREET SIGN LAYOUT SHEET
INSTALLATION ON SIGNAL POLES

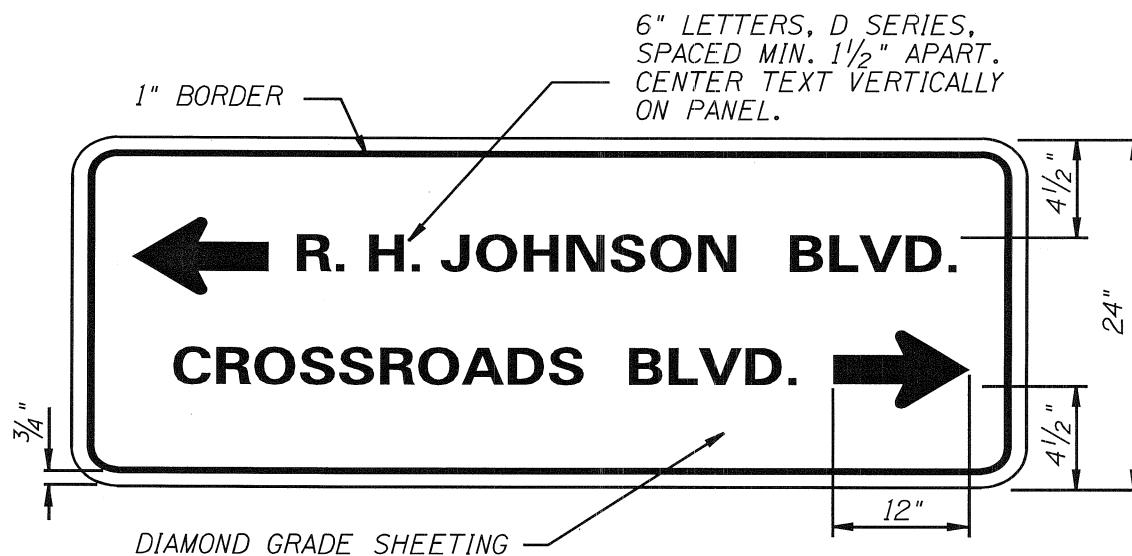


Notes:

1. SPACING BETWEEN WORDS SHALL BE 5" TO 7".
2. SPACING BETWEEN OUTER WORDS, ARROWS AND BORDER SHALL BE 4" TO 12".
3. SIGN SHEETING SHALL BE ALUMINUM BLANKS
4. SIGN LENGTHS SHALL BE 5', 6', 7', 8', 9' OR AS REQUIRED BY THE NUMBER OF LETTERS.



D3-2d



D3-2e

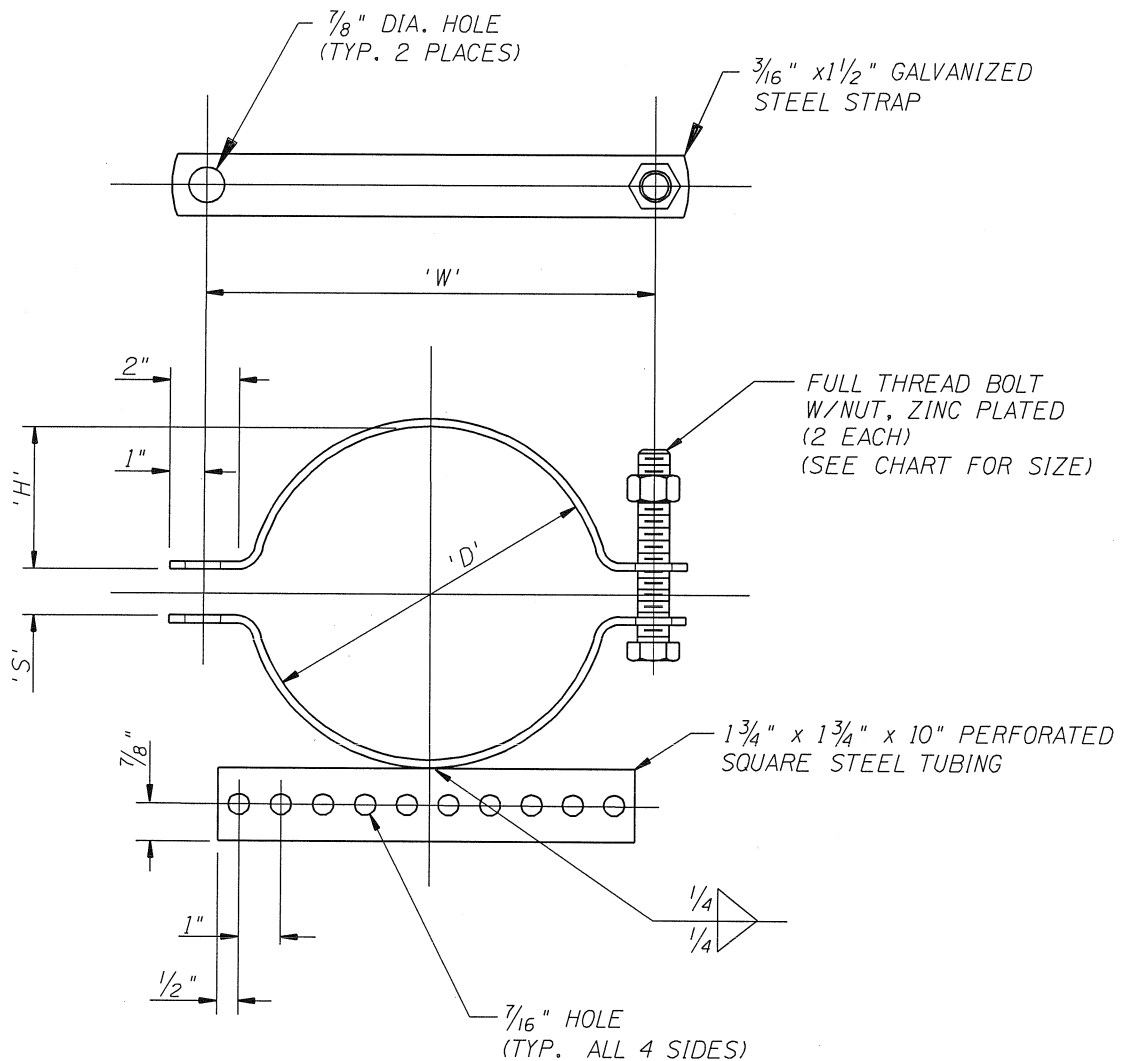
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

METRO STREET SIGN LAYOUT AND INSTALLATION
ON TRAFFIC SIGNAL POLE

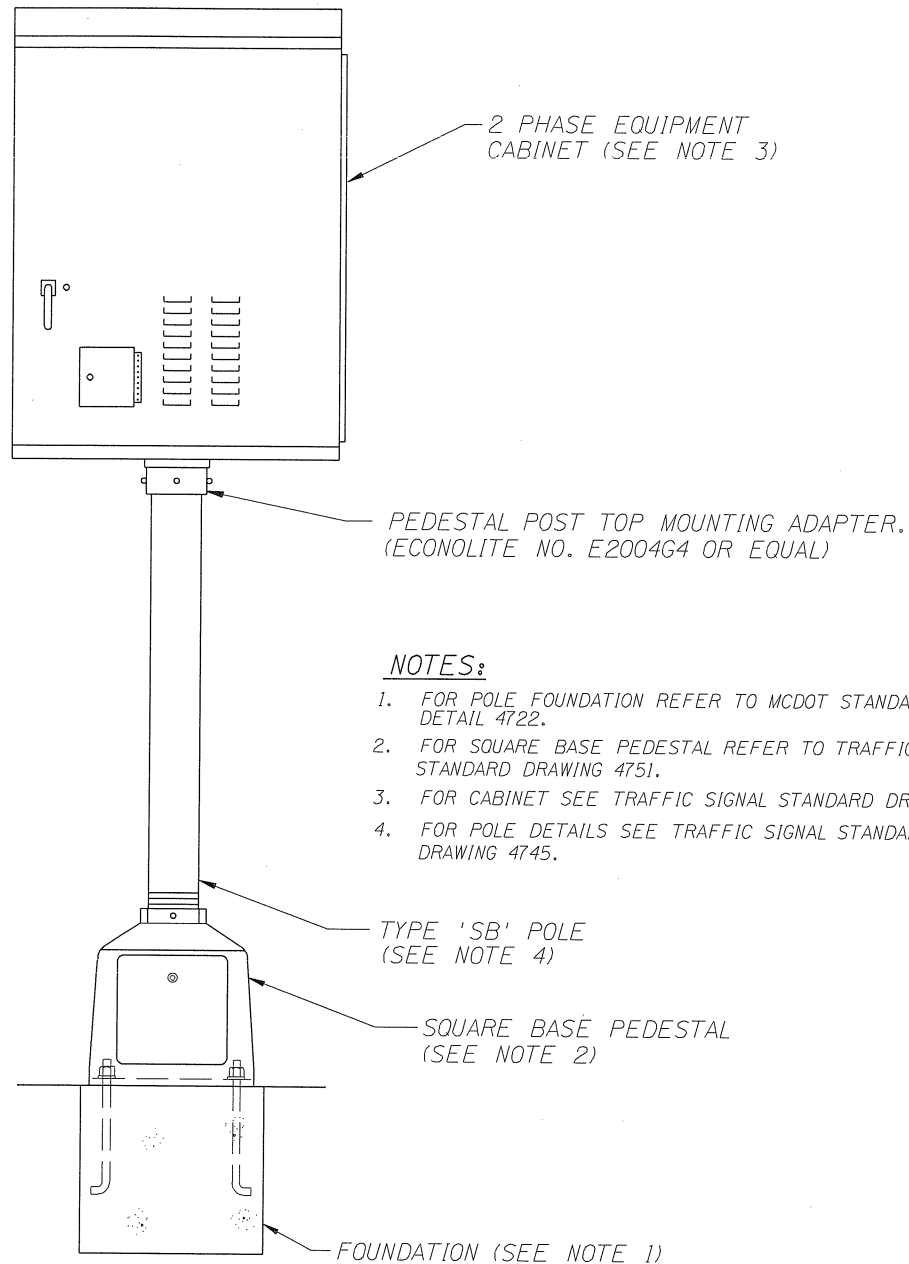
DATE:
01/05

DETAIL NO.
4780-2

POLE TYPE	PART NO.	'D'	'H'	'S'	'W'	BOLT SIZE
F	4780-A	4"	1 1/2"	1"	5 1/4"	3/4" x 3"
E	4780-B	6"	2 1/4"	1 1/2"	7 15/16"	3/4" x 4"
Q	4780-C	8"	3"	2"	10 1/2"	3/4" x 5"
J	4780-D	10"	3 3/4"	2 1/2"	13 1/8"	3/4" x 6"
K/R	4780-E	11 1/2"	4 1/2"	2 1/2"	14"	3/4" x 6"

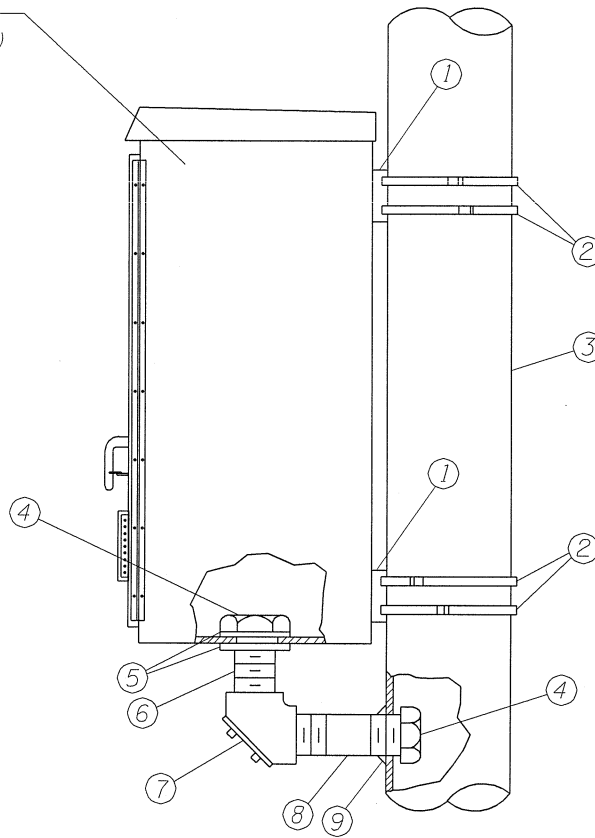


METRO STREET SIGN CLAMP



PEDESTAL POST TOP MOUNTING (G-1)
ITS INSTALLATION ONLY

2 PHASE EQUIPMENT
CABINET (SEE NOTE 2)

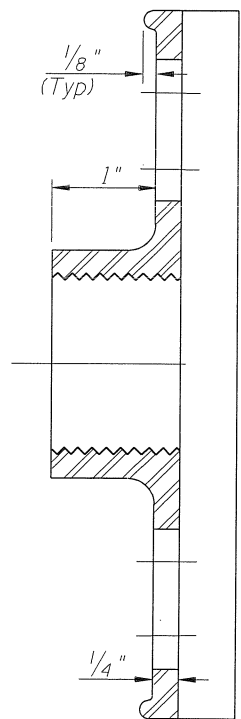


ITEM	QTY.	DESCRIPTION
1	2	POLE CLAMP (ECONOLITE NO. 9463480G1 OR EQUAL)
2	4	1/2" STAINLESS STEEL BAND W/BUCKLE (BAND-IT TYPE 201 OR EQUAL)
3	1	TYPE 'A' POLE OR MULTI-USE POLE
4	2	INSULATING BUSHING
5	2	LOCKNUT
6	1	2" x 2" NIPPLE
7	1	2" x 90° PULLING ELBOW
8	1	2" NIPPLE (SEE NOTE 1)
9	---	SEALING COMPOUND

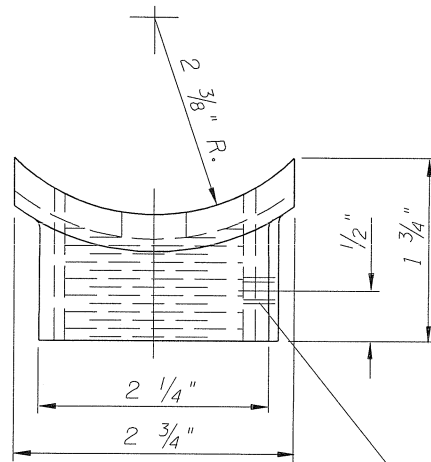
NOTE:

1. FIELD MEASURED TO DETERMINE LENGTH.
2. FOR CABINET SEE TRAFFIC SIGNAL STANDARD DRAWING 4729.

POST SIDE MOUNT (G-2)
ITS INSTALLATION ONLY



'X' - 'X'

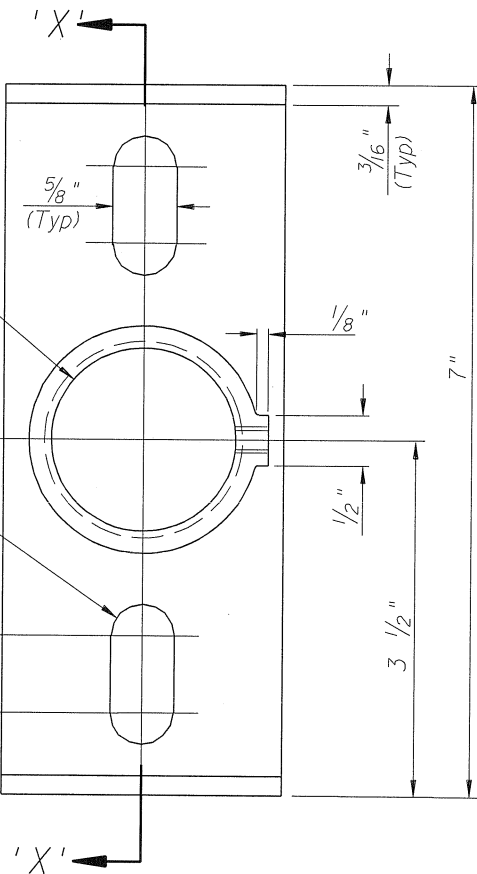


TAP FOR 1/4" - 20 NC
SET SCREW

1 1/2" STD.
PIPE THREAD

5/16" R. (Typ)

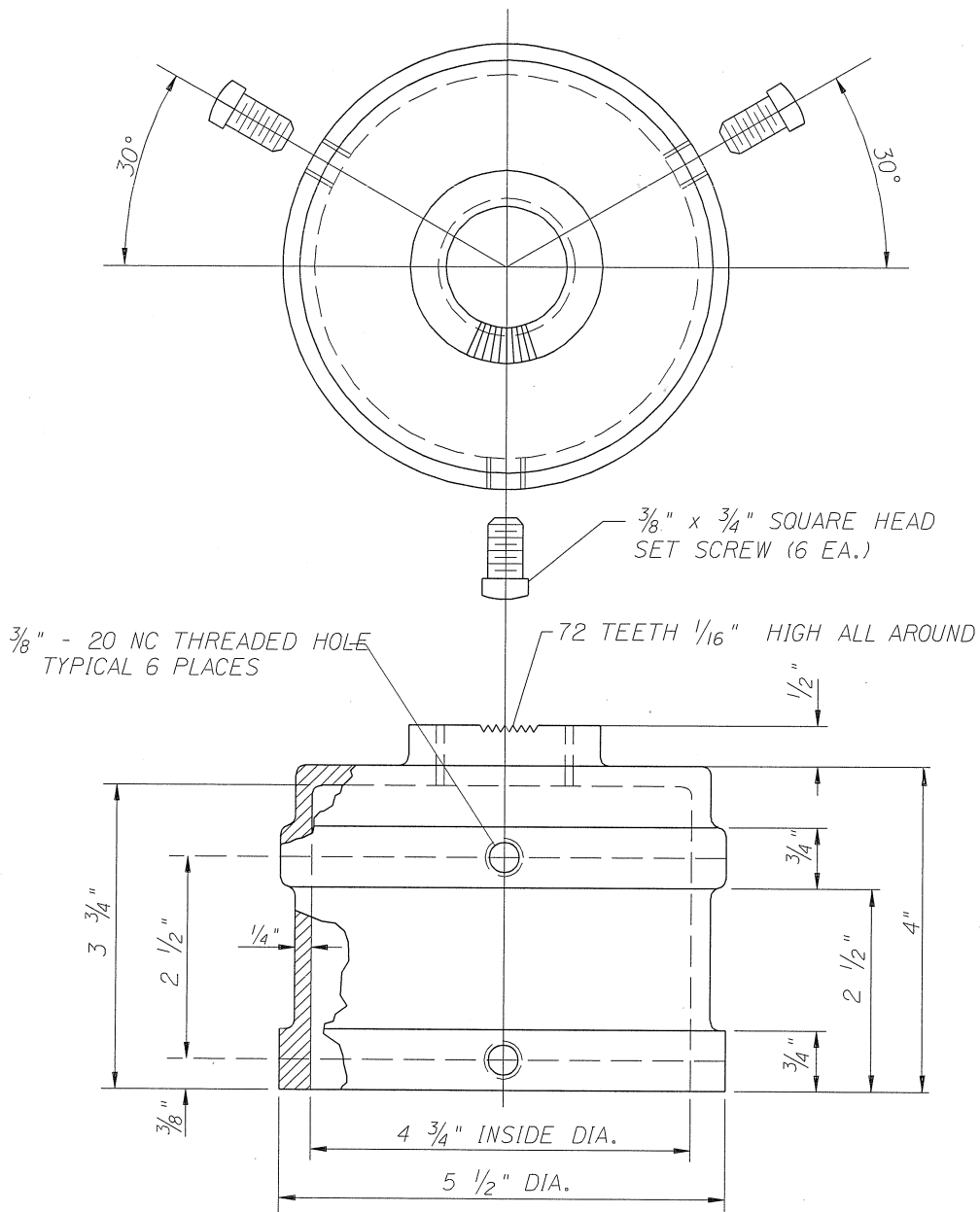
3/4" (Typ)
3/4" (Typ)



NOTES:

1. MATERIAL TO BE ALUMINUM
2. POLE PLATE TO BE PAINTED A FLAT BLACK
3. ALL FILLETS ARE 1/8" RAD.

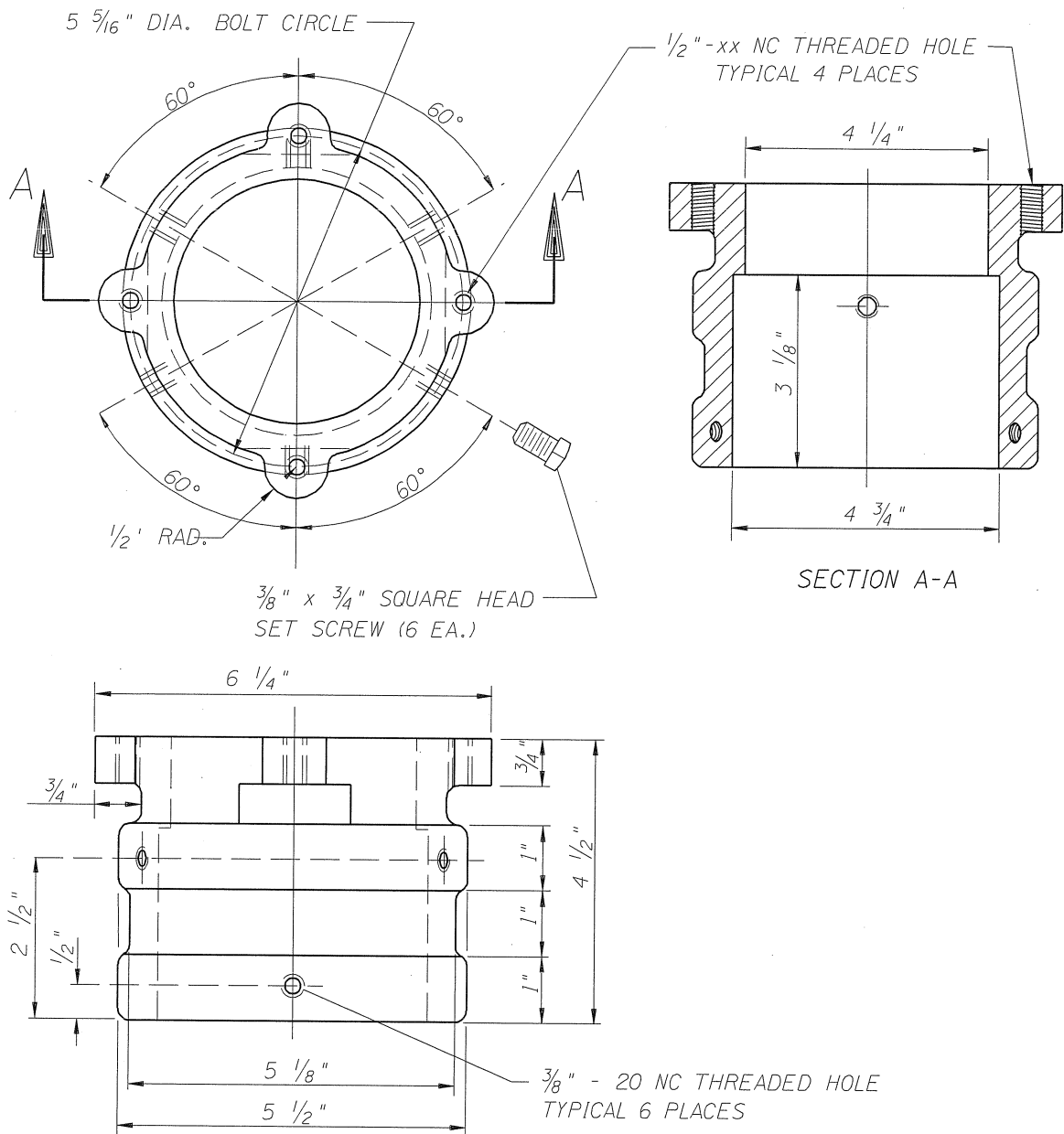
POLE PLATE



NOTES:

1. MATERIAL TO BE ALUMINUM
2. POLE TOP MOUNT TO BE PAINTED A FLAT BLACK
3. ALL FILLETS ARE 3/16" RAD.

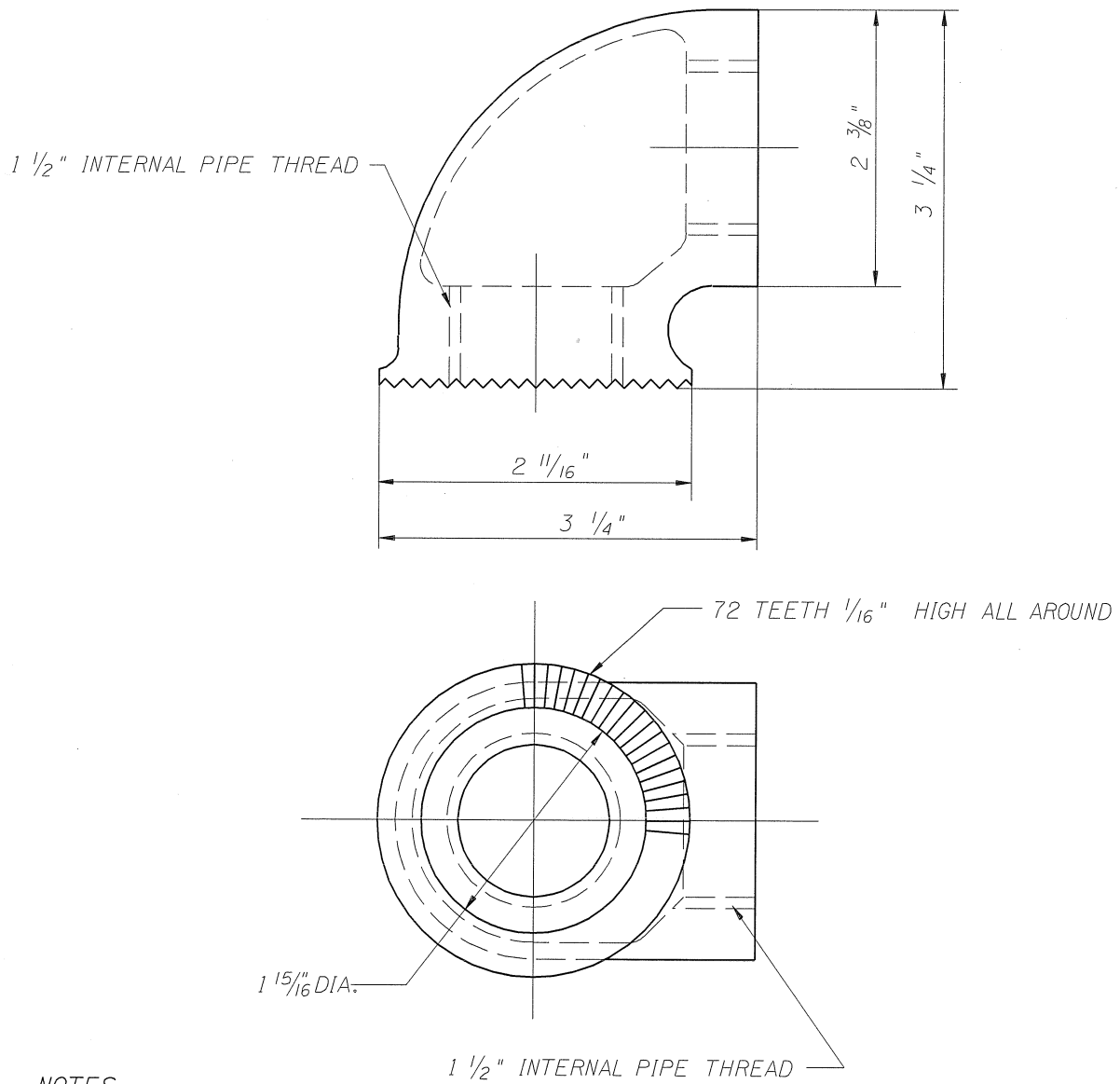
POLE TOP MOUNT ADAPTOR



NOTES:

1. MATERIAL TO BE ALUMINUM
2. PEDESTAL POLE TOP MOUNTING ADAPTER TO BE PAINTED A FLAT BLACK
3. ALL FILLETS ARE $\frac{3}{16}$ " RAD.

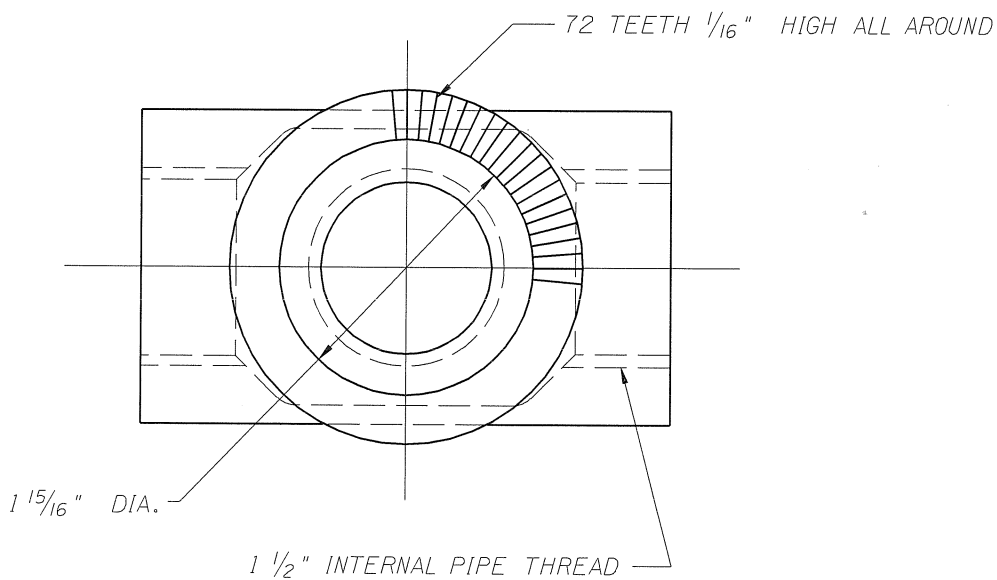
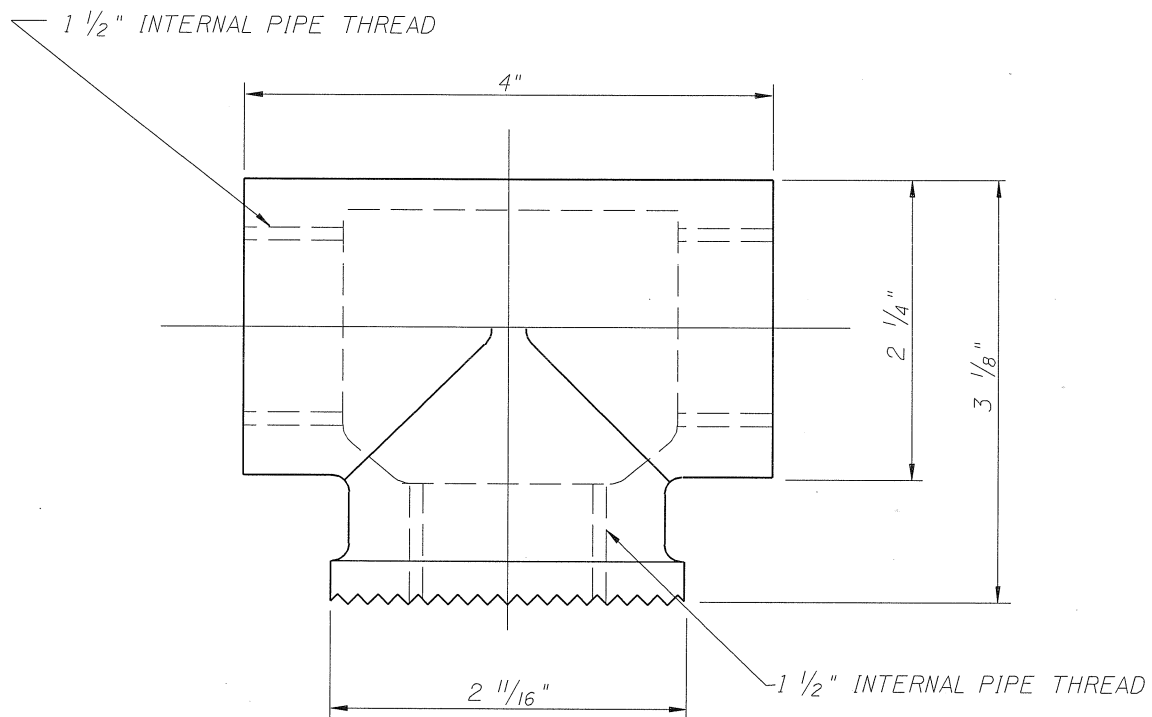
PEDESTAL POLE TOP MOUNTING ADAPTER ITS INSTALLATION ONLY



NOTES:

1. MATERIAL TO BE FERROUS.
2. ELBOW TO BE PAINTED A FLAT BLACK.

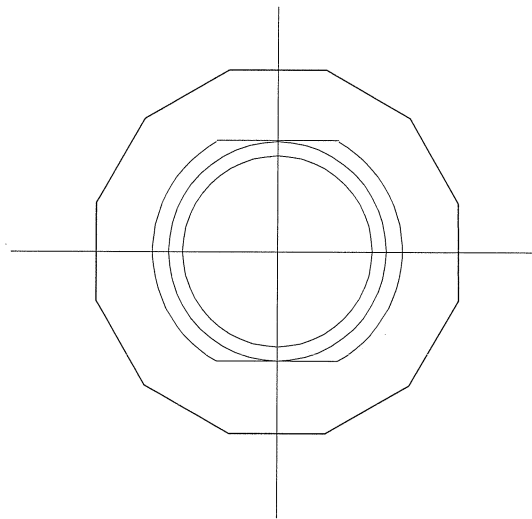
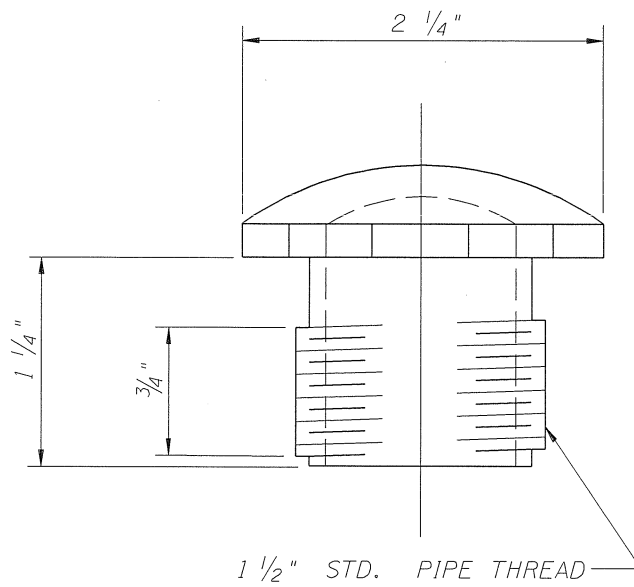
ELBOW



NOTES:

1. MATERIAL TO BE FERROUS.
2. TEE TO BE PAINTED A FLAT BLACK.

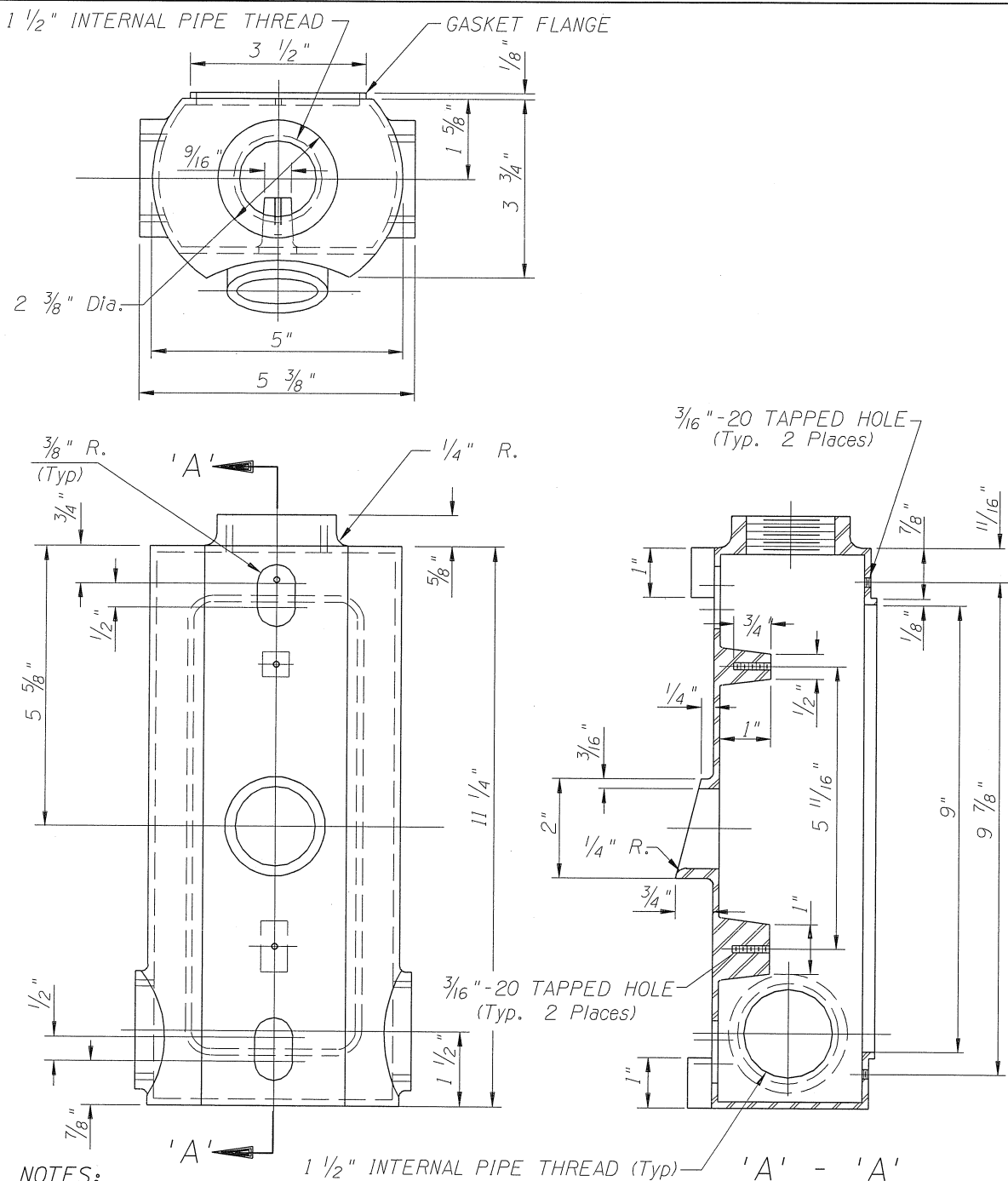
TEE



NOTES:

1. MATERIAL TO BE ALUMINUM.
2. CAP TO BE PAINTED A FLAT BLACK.

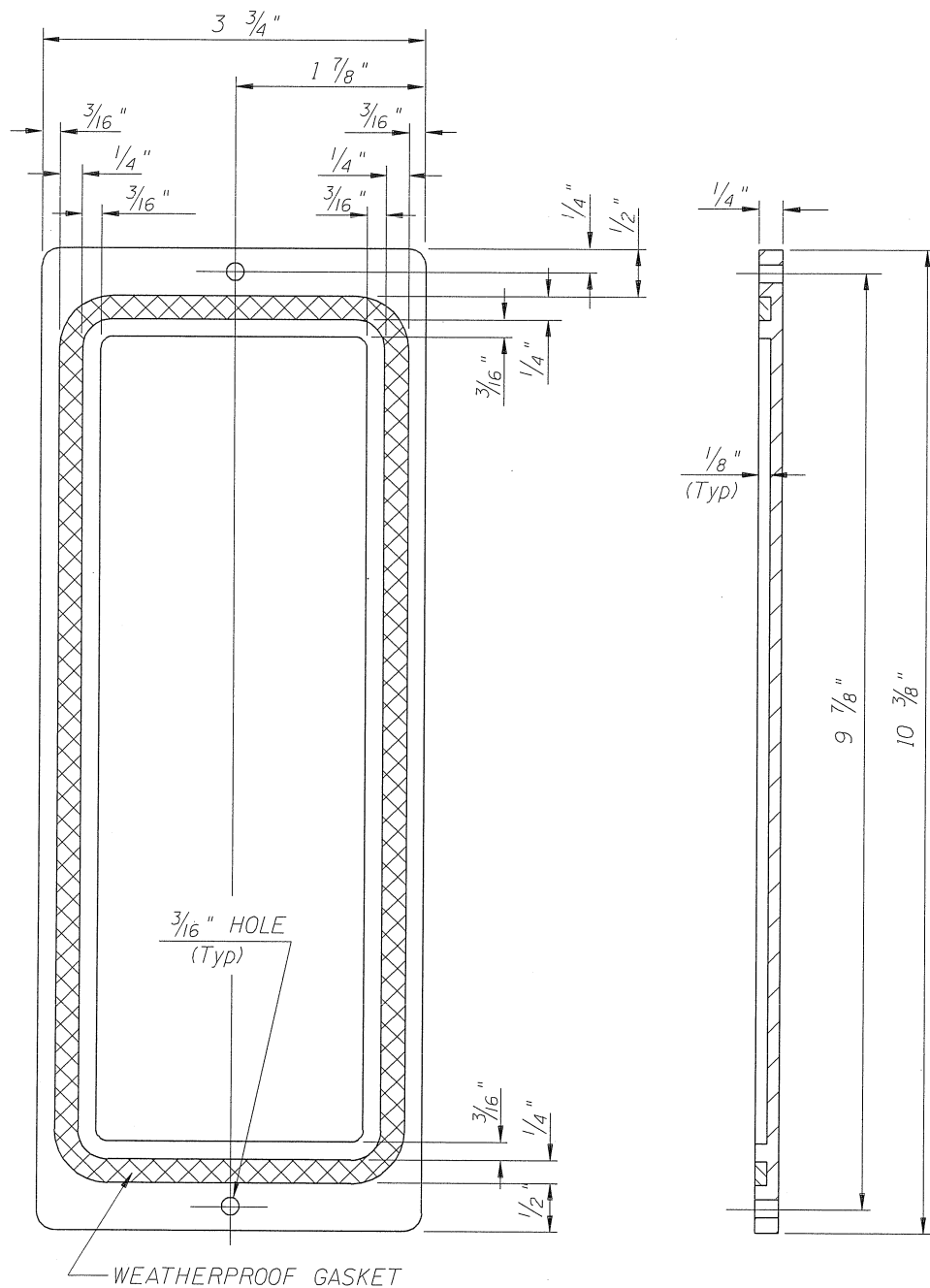
ORNAMENTAL CAP



NOTES:

1. MATERIAL TO BE ALUMINUM OR BRASS.
2. TERMINAL COMPARTMENT TO BE PAINTED A FLAT BLACK
3. ALL FILLETS ARE 1/8" RAD. EXCEPT AS NOTED.
4. TERMINAL TO BE SUPPLIED WITH TWO (2) 3/16" x 5/8"-20 PHILLIPS HEAD MACHINE SCREWS.

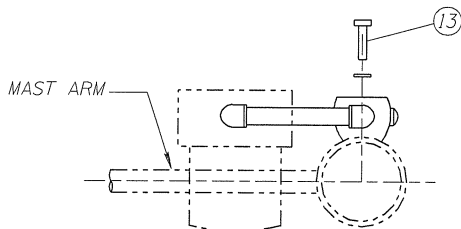
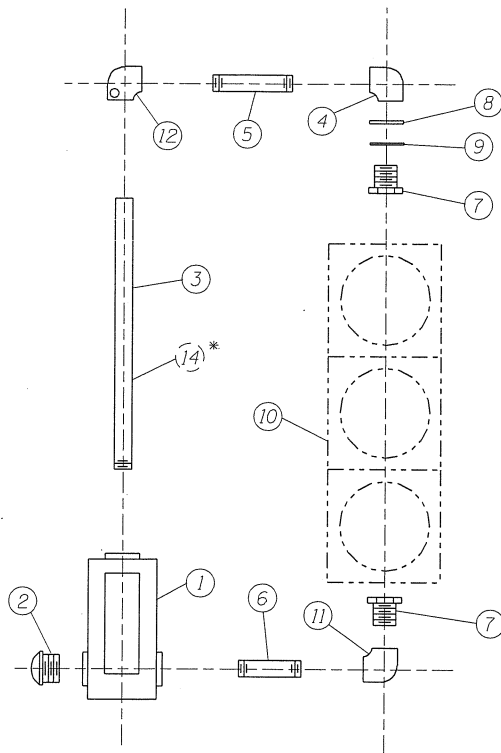
SIDE MOUNTED TERMINAL COMPARTMENT



NOTES:

1. MATERIAL TO BE ALUMINUM OR BRASS.
2. COVER TO BE PAINTED A FLAT BLACK.

TERMINAL COMPARTMENT COVER



MOUNTING ORIENTATION PLAN

(SEE NOTE 3)

NOTES:

1. LOCK NIPPLE LENGTH SHALL BE $1\frac{3}{4}$ " FOR 12" HEADS.
2. FOR POLE DRILLING DETAIL SEE MCDOT STD. DRAWING (4775).
3. MOUNTING ORIENTATION MAY DIFFER FROM WHAT IS SHOWN. SEE PLANS FOR DESIRED ORIENTATION.

LIST OF MATERIALS

Item	Qty.	Description
1	1	TERMINAL COMPARTMENT FOR SIDE MOUNTING. (4792)
2	1	ORNAMENTAL CAP. (SEE 4791)
3	1	$1\frac{1}{2}$ " I.D. PIPE, SEE TABLE.
4	1	$1\frac{1}{2}$ " I.D. PIPE, 90° ELBOW.
5	1	$1\frac{1}{2}$ " I.D. PIPE NIPPLE, $24\frac{1}{2}$ " LONG
6	1	$1\frac{1}{2}$ " I.D. PIPE NIPPLE, 24" LONG.
7	1	$1\frac{1}{2}$ " LOCK NIPPLE, SEE NOTE NO. 1.
8	1	FLAT WASHER.
9	1	NEOPRENE WASHER.
10	1	SIGNAL HEAD, SEE PLANS.
11	1	90° ELBOW WITH LOCKING DEVICE. (SEE 4788).
12	1	$1\frac{1}{2}$ " I.D. PIPE, 90° ELBOW, DRILL & TAP FOR SETSCREW.
13	2	$\frac{1}{2}$ " x 2" GALVANIZED STEEL BOLT 13-UNC WITH FLAT WASHER AND LOCK WASHER.
* 14	1	$1\frac{1}{2}$ " PIPE NIPPLE, $9\frac{1}{2}$ " LONG FOR PED. SIGNAL FOR ILLUMINATED MESSAGE UNITS USE $25\frac{3}{8}$ " PIPE.

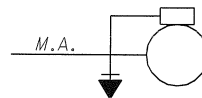
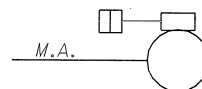
* SPECIAL NIPPLE LENGTH FOR USE ONLY WITH PED. SPECIAL SINGLE HEAD UNITS.

NIPPLE LENGTH

(ITEM 3)

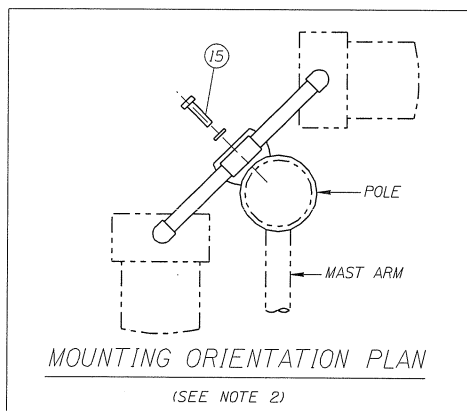
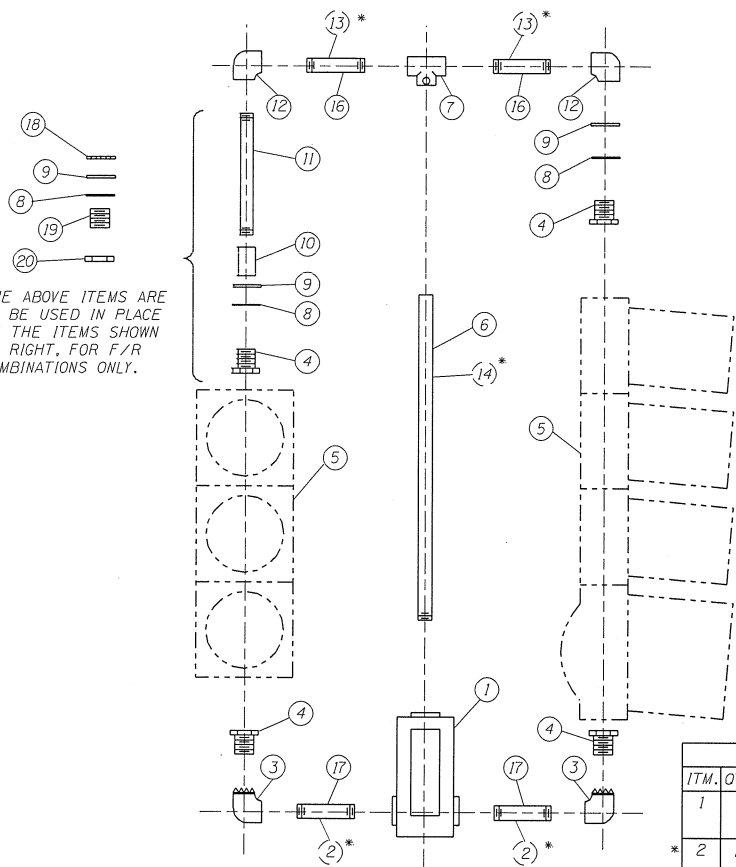
Signal Face	0	F/R	G
Nipple Length	70"	$37\frac{7}{8}$ "	$52\frac{5}{8}$ "

THREADS ON ONE END ONLY.



PLAN SYMBOLS

TYPE V MOUNTING ASSEMBLY



NOTES:

1. LOCK NIPPLE LENGTH SHALL BE $1\frac{3}{4}$ " FOR 12" HEADS.
2. MOUNTING ORIENTATION MAY DIFFER FROM WHAT IS SHOWN. SEE PLANS FOR DESIRED ORIENTATION.

(ITEM 11)

	0	F/R	G
0	0	$29\frac{1}{2}$ "	$16\frac{1}{4}$ "
F/R	$29\frac{1}{2}$ "	0	$13\frac{3}{4}$ "
G	$16\frac{1}{4}$ "	$13\frac{3}{4}$ "	0

SIGNAL FACES COMBINATION

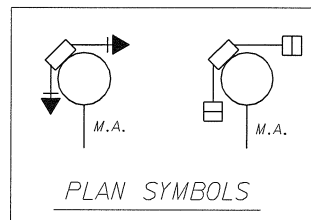
TABLES TO BE USED FOR FINDING NIPPLE LENGTHS.

(ITEM 6)

	0	F/R	G
0	70"	70"	70"
F/R	70"	$37\frac{1}{8}$ "	$52\frac{5}{8}$ "
G	70"	$52\frac{5}{8}$ "	$52\frac{5}{8}$ "

SIGNAL FACES COMBINATION

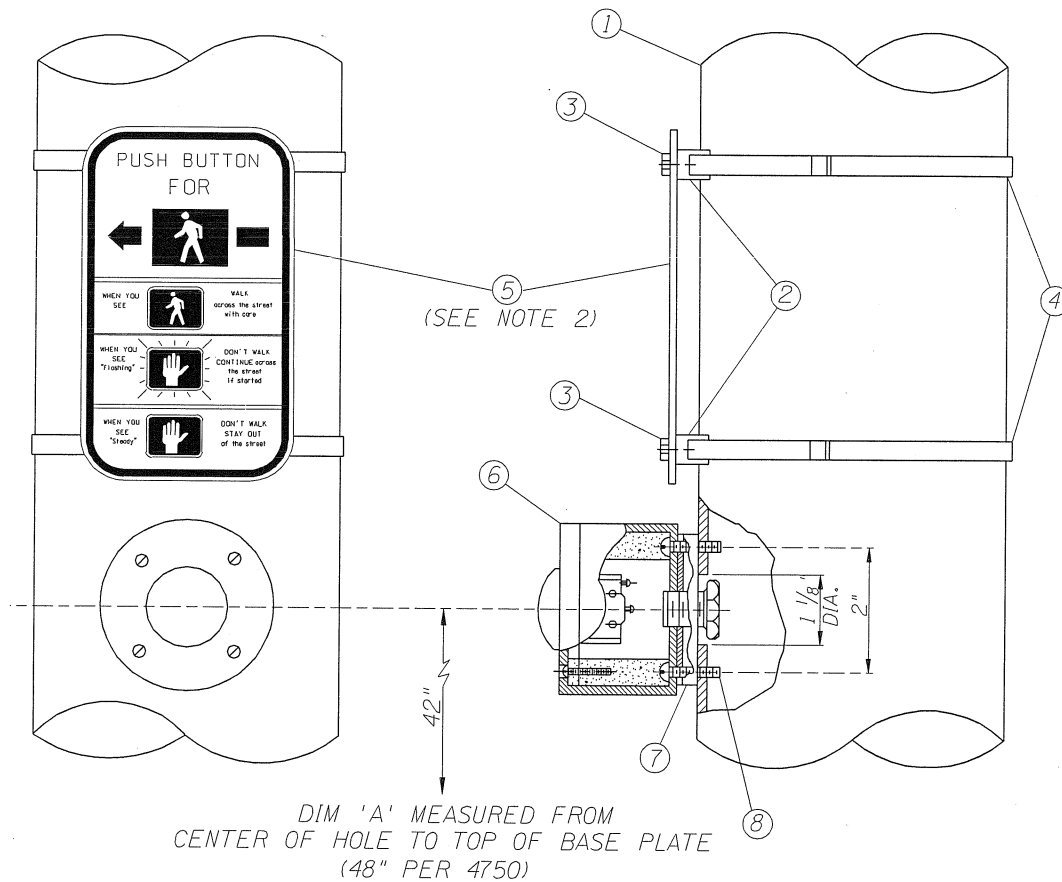
THREADS ON ONE END ONLY.



LIST OF MATERIALS		
ITM.	QTY.	DESCRIPTION
1	1	TERMINAL COMPARTMENT FOR SIDE MOUNTING (4792).
* 2	2	$1\frac{1}{2}$ " PIPE NIPPLE, $11\frac{1}{2}$ " LONG FOR PED. SIGNAL HEADS.
3	2	90° ELBOW WITH LOCKING DEVICE. (4777)
4	4	$1\frac{1}{2}$ " LOCK NIPPLE, SEE NOTE NO. 1.
5	2	SIGNAL HEADS, SEE PLANS.
6	1	CENTER PIPE, SEE TABLE.
7	1	TEE, DRILL & TAP FOR SETSCREW.
8	2	NEOPRENE WASHER.
9	2	FLAT WASHER.
10	1	$1\frac{1}{2}$ " PIPE COUPLING, AS REQUIRED.
11	1	$1\frac{1}{2}$ " PIPE NIPPLE, SEE TABLE.
12	2	90° ELBOW.
* 13	2	$1\frac{1}{2}$ " PIPE NIPPLE, 12" LONG FOR PED. SIGNAL HEADS.
* 14	1	$1\frac{1}{2}$ " Pipe Nipple, $9\frac{1}{2}$ " Long For Ped. SIGNAL HEADS.
15	2	$\frac{1}{2}$ " x 2" GALVANIZED STEEL BOLT 13 UNC WITH FLAT WASHER AND LOCK WASHER.
16	2	$1\frac{1}{2}$ " PIPE NIPPLE, $24\frac{1}{2}$ " LONG.
17	2	$1\frac{1}{2}$ " PIPE NIPPLE, 24" LONG.
18	1	CONDUIT LOCK NUT. (For "F" & "R" COMBINATION ONLY.)
19	1	$1\frac{1}{2}$ " PIPE NIPPLE, 3" LONG (FOR "F" & "R" COMBINATION ONLY.)
20	1	MALLEABLE HEX NUT (FOR "F" & "R" COMBINATION ONLY.)

* SPECIAL NIPPLE LENGTH FOR USE ONLY WITH PED. SIGNAL SINGLE HEAD UNITS.

TYPE VII MOUNTING ASSEMBLY

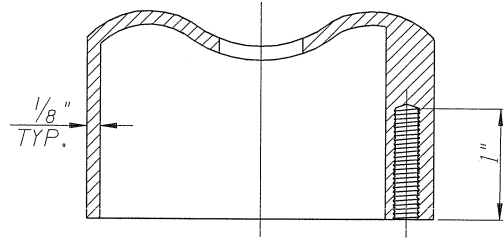
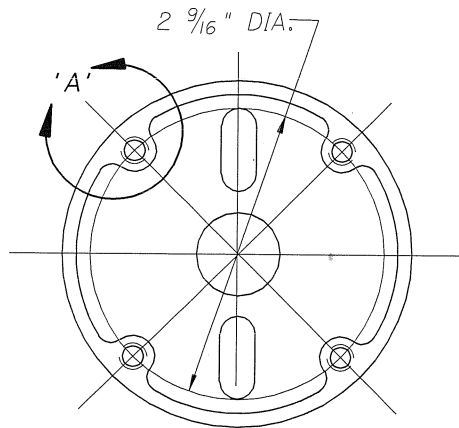
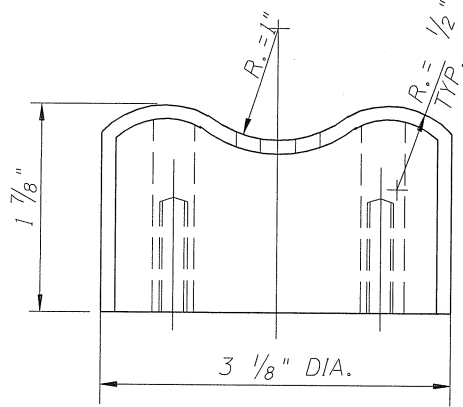
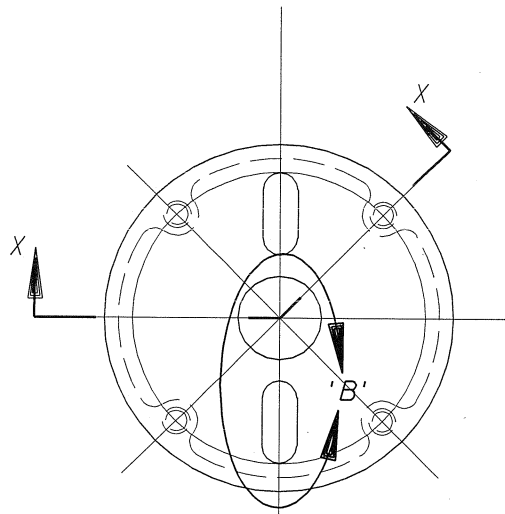


ITEM	QTY.	DESCRIPTION
1	-	SIGNAL POLE SHAFT
2	2	STAINLESS STEEL MINI-BRACKET
3	2	5/16"-24 x 1/2" LONG STAINLESS STEEL BOLT
4	2	1/2" STAINLESS STEEL BAND W/BUCKLE, (BAND-IT TYPE 201 OR EQUAL)
5	1	6" x 12" PEDESTRIAN PUSH-BUTTON SIGN. (SEE MCDOT SIGN MANUAL FOR SIGN NUMBERS R10-4CL, R10-4CR, OR R10-4CB)
6	1	3" DIA. ROUND PED. PUSH-BUTTON, PAINTED GLOSS BLACK (TRAFFIC PARTS INC. NO. PB 502-B03-B, OR EQUAL)
7	1	POLE CURVATURE MOUNTING ADAPTER
8	2	1/4"-20 x 1" LONG SLOTTED R.H. SCREW, DRILLED AND TAPPED

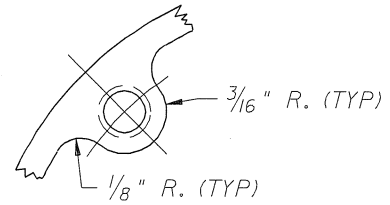
NOTE:

1. FOR INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. FOR CORRECT ARROW DIRECTION, SEE TRAFFIC SIGNAL PLANS.

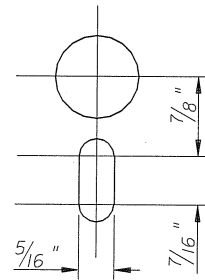
TYPE PB PEDESTRIAN PUSH-BUTTON MOUNT



SECTION X-X



DETAIL 'A'

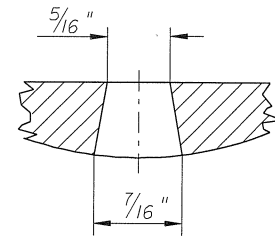
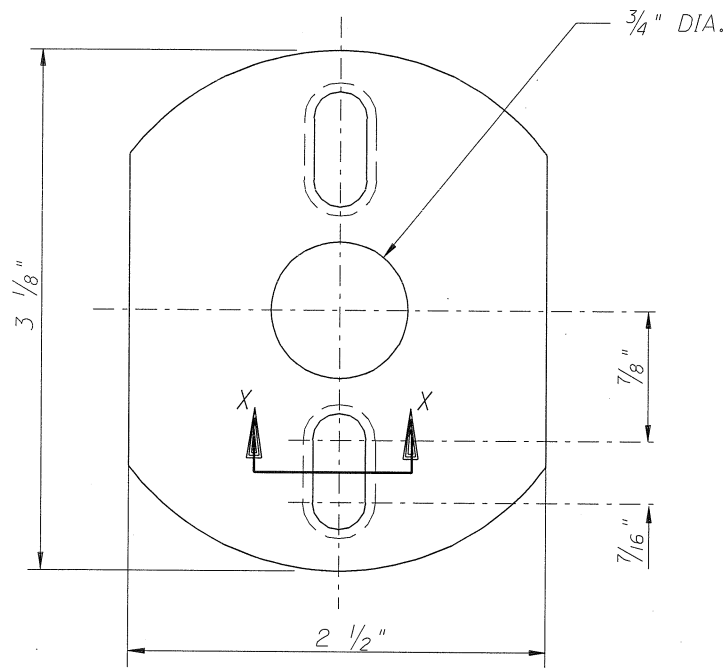


DETAIL 'B'

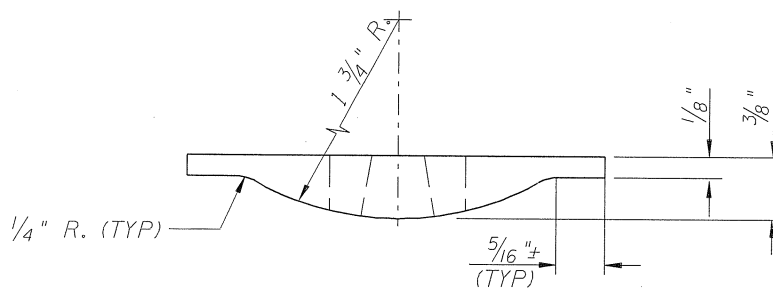
NOTES:

1. MATERIAL TO BE ALUMINUM
2. HOUSING TO BE PAINTED A FLAT BLACK

PEDESTRIAN PUSH-BUTTON HOUSING



SECTION X-X



NOTES:

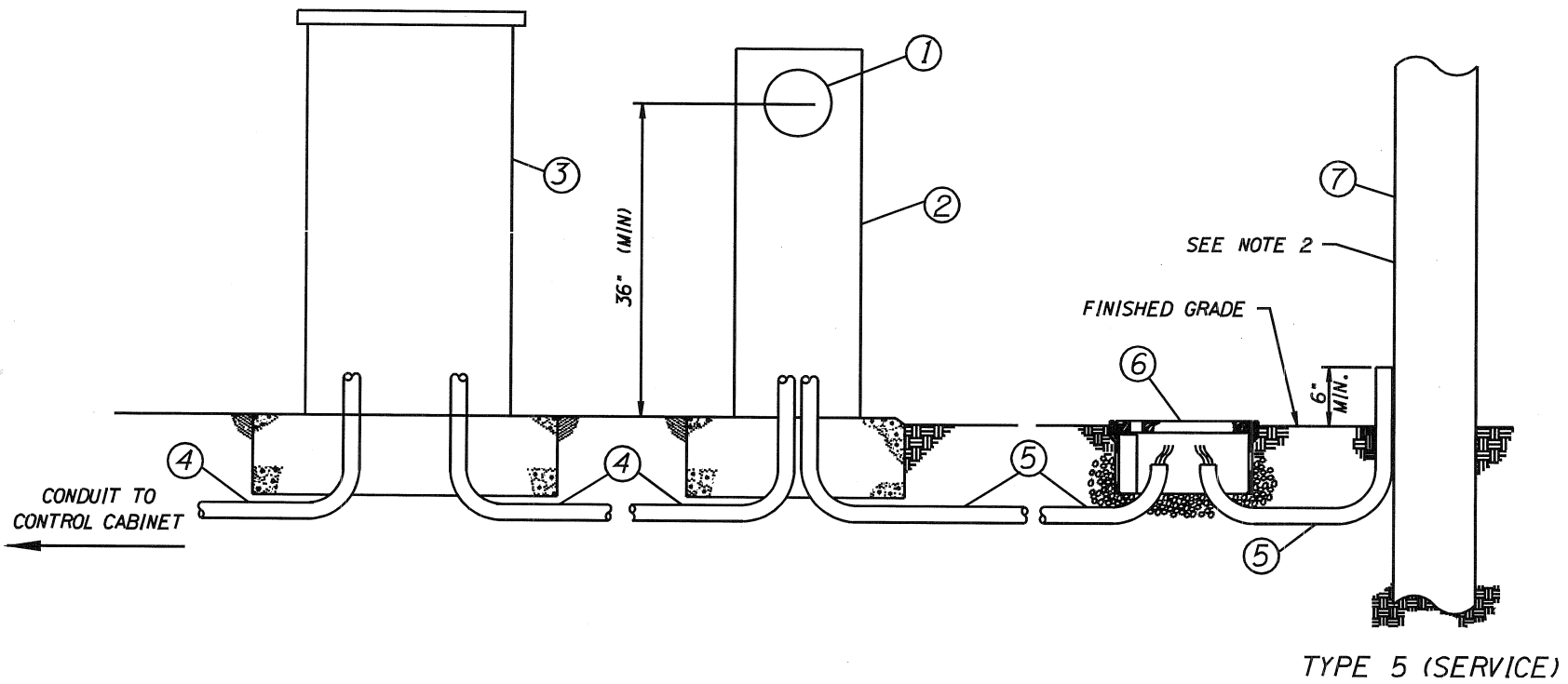
1. MATERIAL TO BE ALUMINUM
2. ADAPTOR TO BE PAINTED A FLAT BLACK

PEDESTRIAN PUSH-BUTTON ADAPTOR PLATE

ITEM	QTY.	DESCRIPTION
1	1	METER (SUPPLIED BY UTILITY COMPANY)
2	1	ELECTRICAL SERVICE PEDESTAL
3	1	BATTERY BACKUP SYSTEM CABINET
4	VARIES	2" PVC CONDUIT RUN
5	1	PVC CONDUIT SERVICE RUN (SIZE AS REQ. BY POWER CO)
6	1	NO. 5 PULL BOX (IF REQUIRED BY POWER COMPANY)
7	1	POWER COMPANY POLE

NOTES:

1. SEE PLANS FOR DIRECTION OF P.V.C. RUNS
2. POWER SOURCE MAY COME FROM PAD MOUNTED TYPE TRANSFORMER.



MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

UNDERGROUND POWER SERVICE AND BATTERY
BACKUP SYSTEM LAYOUT

DATE:
Rev. 01/05

DETAIL NO.
4798

IMSA CABLE 19-1, #14 AWG, 4 CONDUCTOR

<i>SIGNAL HEADS</i>	
<i>BASIC COLOR</i>	<i>SIGNAL INDICATION</i>
<i>RED</i>	<i>RED</i>
<i>BLACK</i>	<i>YELLOW</i>
<i>GREEN</i>	<i>GREEN</i>
<i>WHITE</i>	<i>VEH. COMMON</i>

<i>PEDESTRIAN HEADS</i>	
<i>BASIC COLOR</i>	<i>SIGNAL INDICATION</i>
<i>RED</i>	<i>DON'T WALK</i>
<i>GREEN</i>	<i>WALK</i>
<i>WHITE</i>	<i>PED. COMMON</i>
<i>BLACK</i>	<i>SPARE</i>

NOTES:

- 1. FOR MATERIAL AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.*
- 2. FOR EACH PEDESTRIAN PUSH BUTTON, TWO (2) CONDUCTORS, AN ORANGE AND A WHITE, SHALL BE PULLED FROM THE PULL BOX TO THE PUSH BUTTON STATION.*
- 3. WHEN REQUIRED, TWO (2) CONDUCTORS, A GREEN AND A YELLOW, THWN, #14 AWG, SHALL BE PULLED TO THE END OF EACH MAST ARM FOR FUTURE ARROW APPLICATIONS.*

COLOR CODE - 4 CONDUCTOR CABLE

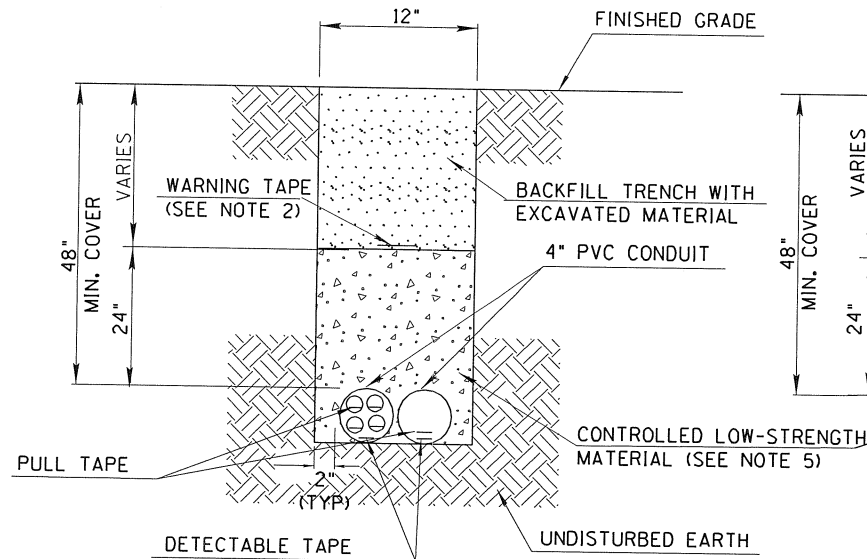
IMSA CABLE 19-1, #14 AWG, 20 CONDUCTOR

CABLE #1	CABLE #2	CONDUCTOR COLOR		SIGNAL INTERVAL
		BASIC COLOR	TRACER STRIPE	
Ø1	Ø5 OR OVERLAP A	RED	-----	RED
		ORANGE	-----	YELLOW
		GREEN	-----	GREEN
Ø2	Ø6 OR OVERLAP B	RED	BLACK	RED
		ORANGE	BLACK	YELLOW
		GREEN	BLACK	GREEN
Ø3	Ø7 OR OVERLAP C	BLACK	RED	RED
		ORANGE	RED	YELLOW
		BLUE	RED	GREEN
Ø4 (SEE NOTE 7)	Ø8 OR OVERLAP D	RED	WHITE	RED
		BLACK	WHITE	YELLOW
		GREEN	WHITE	GREEN
Ø1 PED. OR Ø2 PED.	Ø6 PED.	BLUE	-----	WALK
		BLACK	-----	DON'T WALK
		WHITE	BLACK	PUSH BUTTON
Ø2 PED. OR Ø4 PED.	Ø8 PED.	BLUE	WHITE	WALK
		RED	GREEN	DON'T WALK
		WHITE	RED	PUSH BUTTON
ALL Ø 'S	ALL Ø 'S	WHITE	-----	PUSH BUTTON COMMON
ALL Ø 'S	ALL Ø 'S	BLUE	BLACK	SPARE

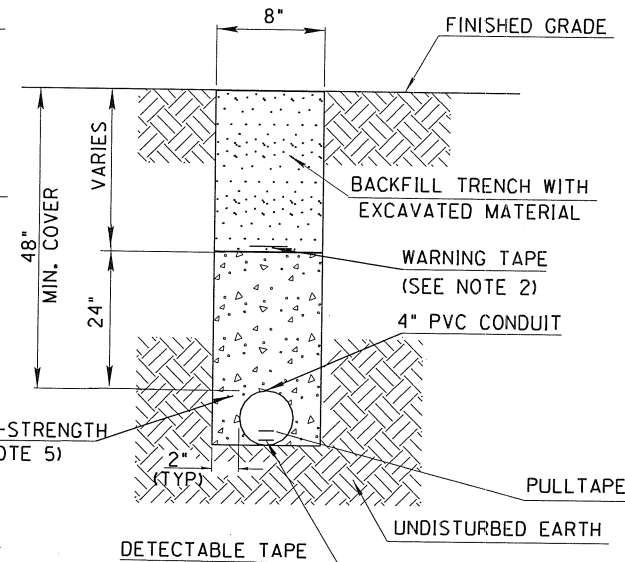
NOTES:

1. FOR MATERIAL AND INSTALLATION SPECIFICATIONS SEE MCDOT SUPPLEMENT, SECTIONS 470 THRU 478.
2. A THWN, #10 AWG, WHITE CONDUCTOR SHALL BE PULLED WITH EACH IMSA CABLE AS A SIGNAL COMMON.
3. FOR THE LUMINAIRE CIRCUIT, TWO (2) CONDUCTORS, THWN #12 AWG, SHALL BE PULLED, A BLACK AND A WHITE.
4. CABLE #1 FOR RING 1.
5. CABLE #2 FOR RING 2. (CABLE #2 SHALL BE MARKED BY TWO (2) WRAPS OF WHITE TAPE)
6. FOR PHASES 1 THRU 4, ONLY CABLE #1 SHALL BE USED.
7. FOR 8 PHASES, CABLES #1 AND #2 ARE REQUIRED.
8. Ø4 MAY BE ASSIGNED AS AN OVERLAP PHASE IN THREE (3) PHASE APPLICATIONS.

COLOR CODE - 20 CONDUCTOR CABLE



TWO 4-INCH CONDUITS



4-INCH CONDUIT

NOTES:

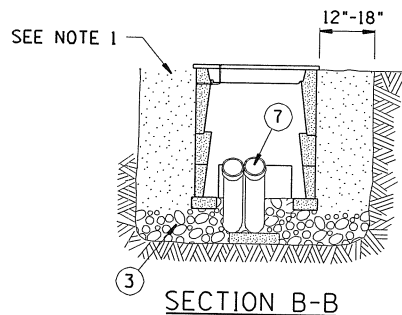
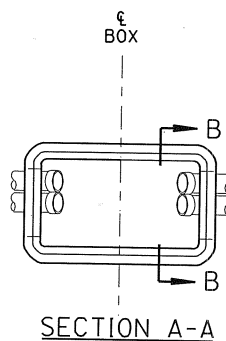
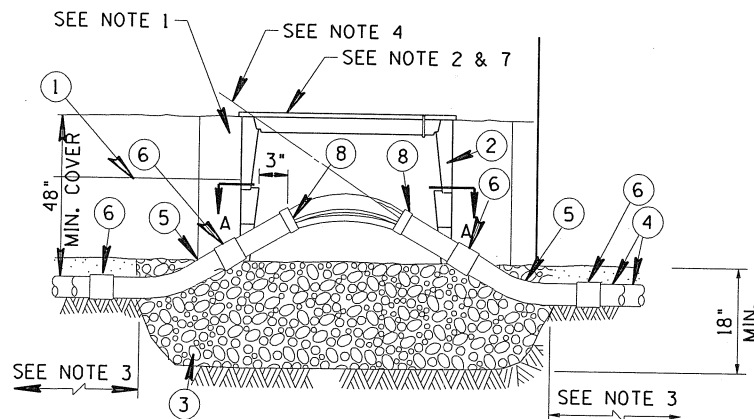
1. DETECTABLE TAPE SHALL BE CONTINUOUSLY INSTALLED ALONG ALL CONDUIT RUNS. DETECTABLE TAPE SHALL NOT BE REMOVED. PULLTAPE SHALL BE USED FOR CABLE OR INNERDUCT INSTALLATION .
2. WARNING TAPE SHALL BE CENTERED OVER CONDUIT AND INSTALLED AT A DEPTH OF 24" FROM FINISHED GRADE. TAPE SHALL MEET THE REQUIREMENTS OF SECTION 481.2.5 OF MCDOT SUPPLEMENT.
3. CONDUIT SHALL BE BLOWN OUT WITH COMPRESSED AIR AND HAVE A METAL DISK MANDREL OF 90% DIAMETER, SMALLER THAN THE INSIDE DIAMETER OF THE CONDUIT PULLED THROUGH BEFORE FIBER CABLE IS INSTALLED.
4. CONDUIT SHALL BE PVC SCHEDULE 40.
5. CONTROLLED LOW STRENGTH MATERIAL PER SECTION 481.3.J (E).
6. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT TO 90% OF MAXIMUM DENSITY.
7. CONDUIT ALIGNMENT OFFSETS ARE TO BE ACCOMPLISHED BY A UNIFORM RATE OF CONDUIT DEFLECTION OVER A DISTANCE EQUAL TO OR GREATER THAN TEN (10) TIMES THE OFFSET DISTANCE.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

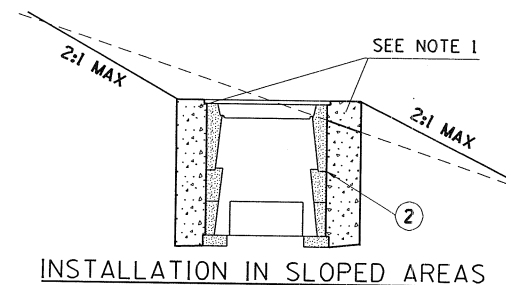
TYPICAL OUTERDUCT INSTALLATION

DATE:
7/21/03

DETAIL NO.
4801



MATERIAL LIST	
ITEM	DESCRIPTION
1	WARNING TAPE
2	NO. 7 PULLBOX WITH EXTENSION W/ EXCEPTIONS AS DRAWN
3	1" SHORT GRADE ROCK
4	4" DIA SCHEDULE 40 P.V.C. CONDUIT
5	30 DEGREE R.M.C. ELBOW, 15" RADIUS
6	R.M.C. TO P.V.C. COUPLING
7	CONDUIT PLUG
8	BELL END FOR PVC WITH SEALED CAP - SEE NOTE 8



NOTES:

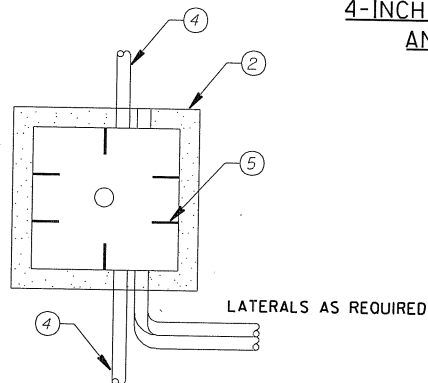
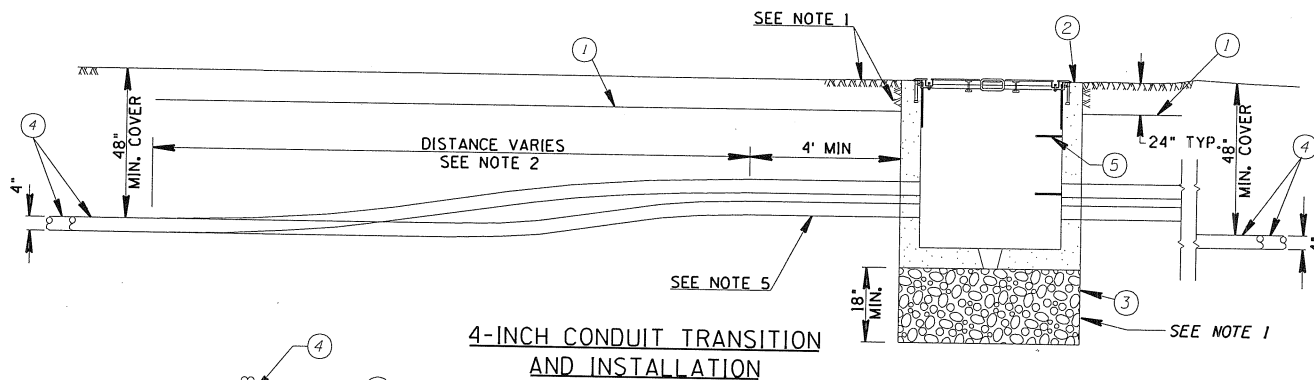
1. BACKFILL WITH CLASS "B" CONCRETE ALL AROUND AND TO BOTTOM OF THE PULL BOX.
2. THIS BOX IS DESIGNED FOR NON-TRAFFIC AREAS. PROVIDE TRAFFIC SAFE REINFORCED COVERS.
3. CONDUIT ALIGNMENT OFFSETS ARE TO BE ACCOMPLISHED BY A UNIFORM RATE OF CONDUIT DEFLECTION OVER A DISTANCE EQUAL TO OR GREATER THAN TEN (10) TIMES THE OFFSET DISTANCE.
4. CONDUIT C/L SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE CABLE PULLING.
5. ALL POWER AND COMMUNICATIONS CABLE SHALL BE TAGGED WITH CABLE IDENTIFICATION.
6. NUMBERS IN CIRCLES REFER TO ITEMS IN MATERIAL LIST.
7. "MCDOT ATMS" SHALL BE CAST ON PULL BOX COVER IN 1" HIGH LETTERS.
8. USE PVC TO EXTEND INTO PULL BOX.
9. REFER TO MCDOT DETAIL 4711 FOR ALL PULL BOX DIMENSIONS. REFER TO MCDOT DETAIL 4712 FOR ALL PULL BOX EXTENSION DIMENSIONS.
10. FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS SEE SECTIONS 480-485 MCDOT SUPPLEMENT.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

CONDUIT AND NO. 7 PULL BOX INSTALLATION

DATE:
03/2003

DETAIL NO.
4810

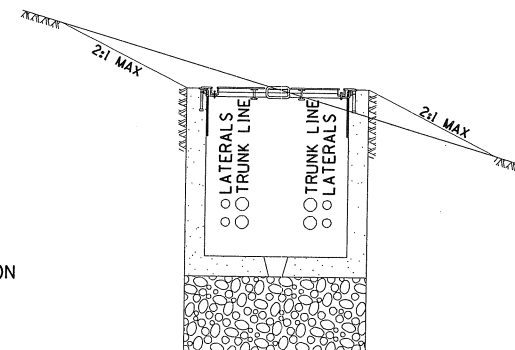


LATERAL CONDUIT INSTALLATION

NOTES:

1. BACKFILL WITH 1" SHORT GRADE ROCK BELOW PULLBOX. BACKFILL AROUND SIDES OF PULL BOX WITH EXCAVATED MATERIAL AND COMPACT TO 90% OF MAXIMUM DENSITY.
2. CONDUIT ALIGNMENT OFFSETS ARE TO BE ACCOMPLISHED BY A UNIFORM RATE OF CONDUIT DEFLECTION OVER A DISTANCE EQUAL TO OR GREATER THAN TEN (10) TIMES THE OFFSET DISTANCE.
3. NUMBERS IN CIRCLES REFER TO ITEMS IN MATERIAL LIST.
4. PLUG EACH CONDUIT END WITH APPROVED, WATERPROOF DUCT PLUG.
5. USE BOTTOM ACCESS POINT IN WALL OF PULL BOX WHEN ONLY A SINGLE 4" PVC CONDUIT IS REQUIRED FOR TRUNK LINE.

MATERIAL LIST	
ITEM	DESCRIPTION
1	WARNING TAPE
2	NO. 9 PULL BOX (CONCRETE)
3	1" SHORT GRADE ROCK
4	4" DIA. SCHEDULE 40 PVC CONDUIT
5	RACK & HOOK (EACH WALL TYP)



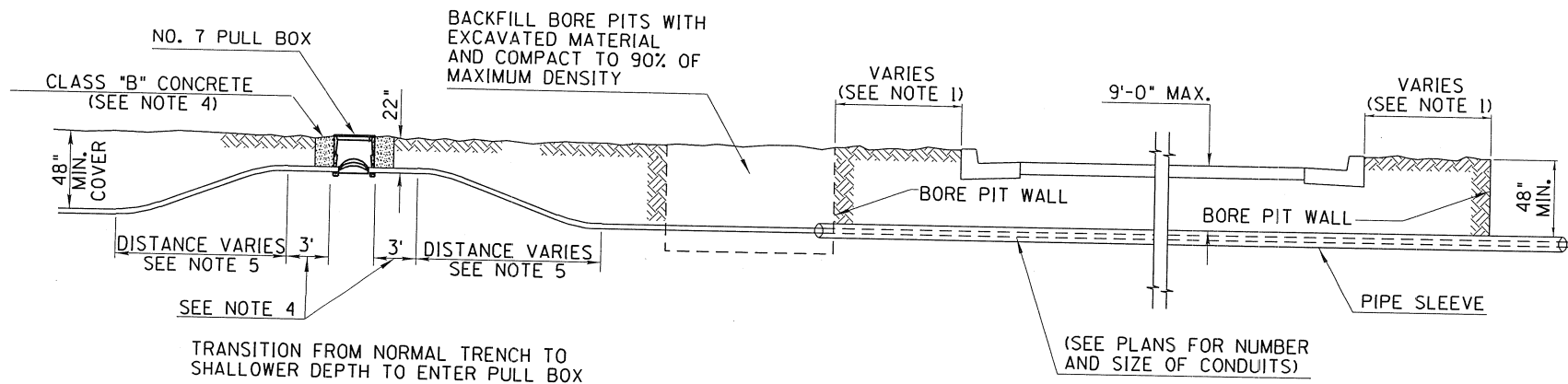
INSTALLATION IN SLOPED AREAS

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

CONDUIT AND NO. 9 PULL BOX INSTALLATION

DATE:
03/2003

DETAIL NO.
4811



NOTES:

1. BORE PIT SHALL BE SET BACK FROM EDGE OF SIDEWALK OR OTHER ROADWAY BOUNDARY FEATURE A DISTANCE EQUAL TO OR GREATER THAN THE DEPTH OF THE PIPE SLEEVE BEING INSTALLED.
2. A NO. 7 PULL BOX SHALL BE INSTALLED ON ONE END OF THE PIPE SLEEVE.
3. INSTALL CLASS "B" CONCRETE 12" TO 18" ALL AROUND PULL BOX. .
4. CONDUIT SHALL BE FLAT FOR A MINIMUM OF 3' ON EACH SIDE OF THE NO. 7 PULL BOX BEFORE STARTING A VERTICAL CONDUIT DEFLECTION.
5. CONDUIT ALIGNMENT OFFSETS ARE TO BE ACCOMPLISHED BY A UNIFORM RATE OF CONDUIT DEFLECTION OVER A DISTANCE EQUAL TO OR GREATER THAN TEN (10) TIMES THE OFFSET DISTANCE.
6. SLEEVES SHALL BE NOMINALLY SLOPED TO DRAIN. SLOPE IN SUPER ELEVATED SECTIONS MAY APPROXIMATE ROADWAY CROSS-SLOPE. SPACE IN SLEEVES NOT OCCUPIED BY CONDUIT SHALL REMAIN EMPTY.
7. SLEEVES SHALL BE BLACK STEEL PIPE OR APPROVED EQUIVALENT (DEPTHS UP TO 9'-0").
8. WARNING TAPE SHALL BE INSTALLED 2' BELOW GRADE OVER ALL NON-METALIC CONDUIT.

SLEEVE SIZE

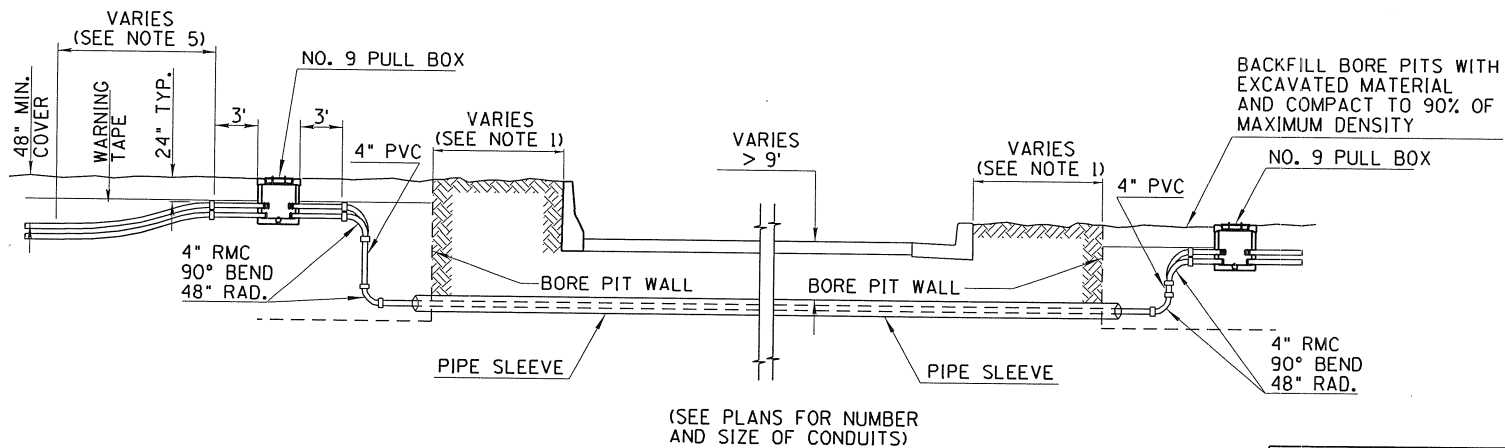
NUMBER OF 4" CONDUITS	MIN REQUIRED INSIDE DIAMETER
1	6"
2	10"

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

TYPICAL CONDUIT THROUGH SLEEVES
DEPTH LESS THAN OR EQUAL TO 9'

DATE:
3/19/03

DETAIL NO.
4812



NOTES:

1. BORE PIT SHALL BE SET BACK FROM EDGE OF SIDEWALK OR OTHER ROADWAY BOUNDARY FEATURE A DISTANCE EQUAL TO OR GREATER THAN THE DEPTH OF THE PIPE SLEEVE BEING INSTALLED.
2. A NO. 9 PULL BOX SHALL BE INSTALLED AT EACH END OF PIPE SLEEVE WHERE DEPTH IS GREATER THAN 9'-0".
3. CONDUIT SHALL BE FLAT FOR A MINIMUM OF 3' ON EACH SIDE OF THE NO. 9 PULL BOX BEFORE STARTING A VERTICAL CONDUIT DEFLECTION.
4. CONDUIT ALIGNMENT OFFSETS ARE TO BE ACCOMPLISHED BY A UNIFORM RATE OF CONDUIT DEFLECTION OVER A DISTANCE EQUAL TO OR GREATER THAN TEN (10) TIMES THE OFFSET DISTANCE.
5. SLEEVES SHALL BE NOMINALLY SLOPED TO DRAIN. SLOPE IN SUPER ELEVATED SECTIONS MAY APPROXIMATE ROADWAY CROSS-SLOPE.
6. ALL 90° BENDS SHALL BE RIGID METAL CONDUIT (RMC).
7. SLEEVES SHALL BE BLACK STEEL PIPE OR APPROVED EQUIVALENT.
8. SEE DETAIL 4811 AND DETAIL 4820 FOR ADDITIONAL INFORMATION ON INSTALLATION OF NO. 9 PULL BOX.
9. WARNING TAPE SHALL BE INSTALLED 2' BELOW GRADE OVER ALL NON-METALIC CONDUIT.

SLEEVE SIZE	
NUMBER OF 4" CONDUITS	MIN REQUIRED INSIDE DIAMETER
1	6"
2	10"

(DEPTHS GREATER THAN 9'-0")

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

**TYPICAL CONDUIT INSTALLATION
THROUGH SLEEVE DEPTH GREATER THAN 9'**

DATE:
03/19/03

DETAIL NO.
4813

DESCRIPTION

1. IT IS THE PURPOSE OF THIS DOCUMENT TO PROVIDE THE GENERAL INFORMATION NECESSARY TO DEFINE THE VARIANCES OF WORK ON TRAFFIC SIGNALS BETWEEN ADOT SPECIFICATIONS & STANDARDS AND THE CITY OF MESA SPECIFICATIONS & STANDARDS.

SPECIFICATIONS AND STANDARDS INCORPORATED IN THIS DOCUMENT:

1. MESA STANDARD DETAILS AMENDMENT TO THE UNIFORM STANDARD DETAILS: CURRENT.
2. ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION: 2000.
3. ADOT TRAFFIC SIGNALS & LIGHTING : 2004 DIVISION OF HIGHWAYS STANDARD DRAWINGS.
4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, TRAFFIC CONTROL SYSTEMS, STANDARDS PUBLICATION: TS2-2003 VER 2.06.
5. INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION, INC., WIRE AND CABLE SPECIFICATIONS: CURRENT.
6. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS: USDOT/FHWA: CURRENT.
7. AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS: CURRENT.

ENGINEER

1. THE CITY OF MESA TRANSPORTATION DIRECTOR ACTING BY AND UNDER THE AUTHORITY OF THE ORDINANCES OF THE CITY OF MESA; AN ASSISTANT OR OTHER REPRESENTATIVE DULY AUTHORIZED BY THE TRANSPORTATION DIRECTOR TO ACT FOR HIM.

FOUNDATIONS

1. ALL CITY OF MESA CABINET FOUNDATIONS SHALL BE ADOT TYPE V (ADOT TS 2-3), WITH THE FOLLOWING CHANGE: THE WIDTH OF THE FOUNDATION BASE (DIMENSION "B") SHALL BE 50" NOT 48". SEE DETAIL M-92.1 FOR FOUNDATION DETAILS.
2. A TEN FOOT COPPER GROUND ROD SHALL BE INSTALLED IN ANY CABINET FOUNDATION OR SERVICE PEDESTAL FOUNDATION BEFORE CONCRETE IS POURED.
3. ANY SIGNAL APPURTENANCE THAT IS SUBJECT TO BEING INSTALLED ON A SLOPE MAY REQUIRE A RETAINING WALL AT THE ENGINEER'S DISCRETION.
4. ANY POLE THAT HAS A PEDESTRIAN PUSH BUTTON STATION ON IT AND THE STATION IS NOT DIRECTLY NEXT TO THE SIDEWALK, SHALL HAVE AN ACCESS PAD INSTALLED TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. THIS PAD IS ADDITIONAL SIDEWALK BETWEEN EXISTING SIDEWALK AND THE POLE BASE. PAD PLACEMENT SHALL BE AS SHOWN ON PLANS OR AS APPROVED BY THE TRAFFIC SIGNAL TECHNICIAN. PER DETAIL M-44.1.

CONDUIT

1. ALL CONDUITS PLACED IN CABINETS, PULLBOXES, AND FOUNDATIONS SHALL HAVE END BELLS INSTALLED BEFORE PULLING IN WIRE OR CABLE.
2. ALL CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE SPECIFIED ON PLANS. HOPE MAYBE USED FOR GUIDED BORES AND ROAD CROSSING INSTALLATIONS ONLY.
3. ALL CONDUITS SHALL HAVE AS A MINIMUM ONE GREEN #8 THIN/THIN COPPER STRANDED BOND WIRE PULLED INTO CONDUITS WITH A MINIMUM OF 3 (THREE) FEET OF WIRE PAST CONDUIT ENDS (EXCEPT FIBER-OPTIC CONDUIT - SEE DETAIL M-93.4).
4. CAP ALL UNUSED AND FUTURE CONDUITS WITH A TAPERED PVC PLUG.

CONTROLLER CABINET ASSEMBLY

1. UNLESS OTHERWISE NOTED ON THE PLANS THE CONTRACTOR SHALL SUPPLY THE CONTROLLER CABINET. SEE "CITY OF MESA" WEB SITE (WWW.CITYOFMESA.ORG) FOR CURRENT SPECIFICATION.
2. UNLESS OTHERWISE NOTED THE CONTROLLER CABINET SHALL FACE THE STREET.

U.P.S. (UN-INTERRUPTABLE POWER SUPPLY)

1. IF CALLED FOR ON THE PLANS THE CONTRACTOR SHALL SUPPLY THE TRAFFIC SIGNAL U.P.S. ASSEMBLY. SEE "CITY OF MESA" WEB SITE (WWW.CITYOFMESA.ORG) FOR CURRENT SPECIFICATION.

VIDEO DETECTION SYSTEMS

1. IF CALLED FOR ON THE PLANS THE CONTRACTOR SHALL SUPPLY THE TRAFFIC SIGNAL VIDEO DETECTION SYSTEM. SEE "CITY OF MESA" WEB SITE (WWW.CITYOFMESA.ORG) FOR CURRENT SPECIFICATION.

CLOSED CIRCUIT TELEVISION SYSTEMS

1. IF CALLED FOR ON THE PLANS THE CONTRACTOR SHALL SUPPLY THE CLOSED CIRCUIT TELEVISION SYSTEM. SEE "CITY OF MESA" WEB SITE (WWW.CITYOFMESA.ORG) FOR CURRENT SPECIFICATION.

POLES

1. REFER TO M-94.2, M-94.3, M-94.4, M-94.5, AND M-94.6 FOR CITY OF MESA POLES AND MAST ARMS (OTHER POLES AND MAST ARMS ARE PER ADOT SPECIFICATIONS EXCEPT AS NOTED).
2. ALL SUPPORTS SHALL BE DESIGNED TO MEET OR EXCEED AASHTO 80 MPH WIND LOAD REQUIREMENTS.
3. ALL POLES AND MAST ARMS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED ON PLANS.
4. ALL "A" POLES SHALL BE OF THE TAPERED TYPE AS SHOWN ON M-94.1.
5. PUSH BUTTON POLES (BIKE AND PEDESTRIAN) SHALL BE 11 GAUGE STEEL AS SHOWN ON DETAIL M-94.9.

LUMINAIRES

1. ALL LUMINAIRES SHALL BE PER CITY OF MESA STANDARD DETAILS.
2. ALL LUMINAIRES ON SIGNAL POLES SHALL HAVE INDIVIDUAL PHOTOELECTRIC CELLS AND SHALL BE 120 VAC.

PAINTING

1. ALL METAL EXTERIOR SURFACES OF TRAFFIC SIGNALS, PEDESTRIAN SIGNALS, PUSH BUTTON STATIONS, AND FRAMEWORK SHALL BE PRE-TREATED AND ELECTROSTATICALLY POWDER COATED FLAT BLACK.

MOUNTING ASSEMBLIES FOR VEHICULAR AND PEDESTRIAN INDICATIONS

1. ALL MOUNTING ASSEMBLIES SHALL BE BRONZE.
2. REFER TO M-95.1 FOR MOUNT PLACEMENT.
3. AS AN ADDENDUM TO ADOT TS 10-1, NO LOCK RINGS SHALL BE PERMITTED ON ANY PART OF THE MOUNT. LOWER ELBOWS SHALL HAVE 72 TEETH SERRATIONS 1/16" HIGH CAST INTO THE ELBOW SO AS TO BE A ONE PIECE UNIT.
4. THE UPPER ELBOW SHALL BE THREADED 1 1/2" NPT. THE SIGNAL HEAD SIDE SHALL HAVE A FLANGE OF AT LEAST 3/8" TO ENSURE THE HEAD, METAL WASHER, AND RUBBER GASKET ARE NOT DISTORTED WHEN SECURED.
5. ALL PIPE THREADS WHETHER INTERNAL OR EXTERNAL SHALL BE OF THE TAPERED TYPE.
6. ALL PIPE SHALL BE SCHEDULE 40 (0.145" WALL THICKNESS).

VEHICLE SIGNAL INDICATIONS (8" AND 12")

1. ALL INDICATIONS SHALL BE LIGHT EMITTING DIODE (LED). SEE "CITY OF MESA" WEB SITE (WWW.CITYOFMESA.ORG) FOR CURRENT SPECIFICATION.
2. TRAFFIC SIGNAL HEADS SHALL BE MADE OF POLYCARBONATE MATERIAL.
3. INDICATION/VISOR DOORS SHALL BE EASILY REMOVED, WITHOUT HAVING TO DRIVE OUT RETAINING HINGE PINS.
4. TUNNEL VISORS SHALL BE 8" LONG FOR 8" HEADS AND 12" LONG FOR 12" HEADS. THEY SHALL BE MADE OF ALUMINUM. THEY SHALL BE ATTACHED TO THE SIGNAL HEAD BY SCREWS THROUGH 90 DEGREE RIGHT ANGLE MOUNTING TABS. (SEE ADOT TS 9-2 FOR DESIGN SPECIFICATIONS).
5. BACKPLATES WITH 5" BORDERS SHALL BE USED ON ALL 8 AND 12 INCH HEADS. ALL BACKPLATES SHALL BE LOUVERED ALUMINUM. ALL BACKPLATES SHALL BE ONE PIECE ALUMINUM EXCEPT FOR TYPE "S" CLUSTER HEADS WHICH SHALL HAVE NO MORE THAN 3 SECTIONS TOTAL.
6. MAST ARM SIGNAL HEADS SHALL BE SUPPLIED WITH ADOT TYPE II MOUNTS. THE MOUNTS SHALL BE OF THE OFFSET "DOG LEG" TYPE. MOUNTS SHALL HAVE CAST IN SERRATIONS. SERRATED LOCKING RINGS WILL NOT BE PERMITTED. MOUNTS SHALL BE MADE OF BRONZE.

7. ALL BODY WASHERS ON HEADS SHALL BE AS SHOWN ON M-95.2.
8. FOR CLUSTER HEADS REFER TO COM M-95.3 FOR CITY OF MESA TYPE "S" HEAD (5 SECTION CLUSTER).
9. ALL SIGNAL HEAD ASSEMBLIES SHALL BE GUARANTEED BY THEIR MANUFACTURER FOR A MINIMUM OF FIVE (5) YEARS.
10. ALL HEADS ARE TO BE FULLY ASSEMBLED AND READY FOR INSTALLATION. VISORS MAY BE PACKAGED AND SHIPPED SEPARATELY.

PEDESTRIAN INDICATIONS

1. ALL INDICATIONS SHALL BE LIGHT EMITTING DIODE (LED) INTERNATIONAL WALKING PERSON/HAND SYMBOL. PEDESTRIAN SIGNALS SHALL BE FURNISHED AND INSTALLED. SEE "CITY OF MESA" WEB SITE (WWW.CITYOFMESA.ORG) FOR CURRENT SPECIFICATION.
2. PEDESTRIAN HEAD ASSEMBLIES SHALL BE GUARANTEED BY THEIR MANUFACTURER FOR A MINIMUM OF FIVE (5) YEARS.
3. ALL LEADS SHALL HAVE FULLY INSULATED TERMINALS.
4. PEDESTRIAN INDICATIONS SHALL BE OVERLAY FILLED/FILLED PER MUTCD SECTION 4E.04.

PUSH BUTTONS

1. ALL PUSH BUTTON STATIONS SHALL BE AS SHOWN ON M-95.4. MICROSWITCH WITH LEVER PLUNGER OR APPROVED EQUAL.
2. ALL PUSH BUTTON STATIONS SHALL USE A MICRO SWITCH YZ-2RW05551.
3. FOR SIGNS REFER TO M-99.1.
4. FOR MOUNTING REFER TO M-95.1.
5. FOR BIKE PUSH BUTTON INSTALLATION REFER TO M-94.8.
6. ALL PUSH BUTTON STATIONS SHALL BE GUARANTEED BY THEIR MANUFACTURER FOR A MINIMUM OF FIVE (5) YEARS.
7. FOR CONCRETE CONSTRUCTION OF ADA ACCESS TO PUSH BUTTONS REFER TO M-44.1.
8. FOR ADDITIONAL SIDEWALK CONCRETE CONSTRUCTION CONCERNING BIKE PUSH BUTTON POLES REFER TO M.A.G. 340.

BOLD BAR INDICATES A CHANGE TO THE NOTE TO THE RIGHT.

CONTRACTOR'S RESPONSIBILITY

1. ALL WORK IS TO BE ACCOMPLISHED IN ACCORDANCE WITH CITY OF MESA SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
2. THE CITY OF MESA REQUIRES AT LEAST TWO INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA) CERTIFIED TRAFFIC SIGNAL TECHNICIANS ON SITE DURING ALL PHASES OF ANY TRAFFIC SIGNAL WORK. ONE TECHNICIAN MUST AT LEAST BE A LEVEL II. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE VERIFICATION OF CERTIFICATION. IF A JOB SITE IS INSPECTED AND A CERTIFIED TECHNICIAN IS NOT ON SITE, A STOP WORK ORDER WILL BE ISSUED.
3. CONTRACTOR SHALL SUBMIT A LIST CONTAINING NAMES AND QUALIFIED STATUS OF PERSONNEL THAT WILL BE ON THE IMMEDIATE JOB SITE TO THE ENGINEER OR THEIR REPRESENTATIVE PRIOR TO STARTING ANY TYPE OF CONSTRUCTION. ANY CHANGE IN THIS LIST WILL REQUIRE IMMEDIATE NOTIFICATION TO THE ENGINEER OR THEIR REPRESENTATIVE.

4. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY TRAFFIC SIGNAL EQUIPMENT DAMAGE TO THE ENGINEERING INSPECTOR.

DAMAGE TO ANY TRAFFIC SIGNAL EQUIPMENT SUCH AS CONTROLLER CABINET AND EQUIPMENT, DETECTION LOOPS, PULL BOXES, CONDUIT, POLES, MAST ARMS, HEADS OR RELATED EQUIPMENT AS A RESULT OF THE CONTRACTOR'S WORK IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE AS REQUIRED BY THE CITY. A CITY OF MESA TRAFFIC SIGNAL TECHNICIAN SHALL INSPECT THESE REPAIRS.

- A. A TRAFFIC SIGNAL CANNOT BE DARK OR IN FLASH FOR MORE THAN TWO HOURS.
- B. A LOSS OF COMMUNICATION SHALL BE REPAIRED WITHIN 24 HOURS.
- C. DETECTOR LOOPS SHALL BE REPLACED IN TWO WEEKS UNLESS THE TRAFFIC SIGNAL FOREMAN AGREES IN WRITING THAT WORK SCHEDULE REQUIRES ADJUSTMENT OF THIS TIME FRAME.

IF THE CONTRACTOR CANNOT RESPOND OR MAKE THE REPAIRS WITHIN THE ABOVE NOTED TIME FRAME THE CITY OF MESA TRAFFIC SIGNAL GROUP WILL MAKE THE NECESSARY REPAIRS AND CHARGE THE CONTRACTOR USING A "REPAIR ORDER FORM". THE AMOUNT OF EACH REPAIR SHALL BE EITHER \$350.00 OR THE ACTUAL ACCUMULATED CHARGE FOR EMPLOYEES' TIME, MATERIALS AND EQUIPMENT, WHICHEVER IS GREATER. EMPLOYEES' TIME WILL BE BILLED AT EACH INDIVIDUAL'S HOURLY RATE PLUS THE APPLICABLE CITY OVERHEAD RATE. ANY MATERIALS USED WILL BE BILLED AT COST. EQUIPMENT RATES WILL BE BASED ON THE MOST RECENT SCHEDULE OF EQUIPMENT RENTAL RATES FOR FORCE ACCOUNT WORK, AS APPROVED BY THE ARIZONA DEPARTMENT OF TRANSPORTATION.

THE CONTRACTOR IS ADVISED THAT ANY COSTS RELATED TO REPAIR OR REPLACEMENT OF DAMAGED TRAFFIC SIGNAL EQUIPMENT AS A RESULT OF THE CONTRACTOR'S WORK SHALL BE BORNE BY THE CONTRACTOR.

IF THERE IS A TRAFFIC SIGNAL PROBLEM (I.E. BULB OUTAGES, KNOCKDOWNS, UTILITY POWER OUTAGES, ETC) AND IS NOT A DIRECT RESULT OF THE CONTRACTOR OR SUB-CONTRACTOR'S WORK, A TRAFFIC SIGNAL TECHNICIAN SHALL BE CALLED TO RESPOND. IF IT IS DETERMINED THE CONTRACTOR OR SUB-CONTRACTOR'S WORK CAUSED THE TRAFFIC SIGNAL MALFUNCTION, THE CONTRACTOR THROUGH A "REPAIR ORDER FORM" SHALL PAY ALL THE COSTS OF REPAIRS.

IF THE TRAFFIC SIGNAL FIBER OPTIC CABLE IS DAMAGED AS A RESULT OF A PROJECT, TRAFFIC SIGNAL FIBER OPTIC CABLE SHALL BE REPLACED IN THE INCREMENT FOR WHICH IT WAS ORIGINALLY INSTALLED. NO NEW SPLICES POINTS WILL BE INTRODUCED INTO THE SYSTEM.

WARRANTY

1. CONTRACTOR SHALL WARRANTY WORKMANSHIP FOR A PERIOD OF 12 MONTHS FROM DATE OF ACCEPTANCE.
2. EQUIPMENT WARRANTIES WILL BE GIVEN TO THE CITY OF MESA TRAFFIC SIGNALS WORKGROUP AT THE TIME OF ACCEPTANCE OF THE PROJECT.

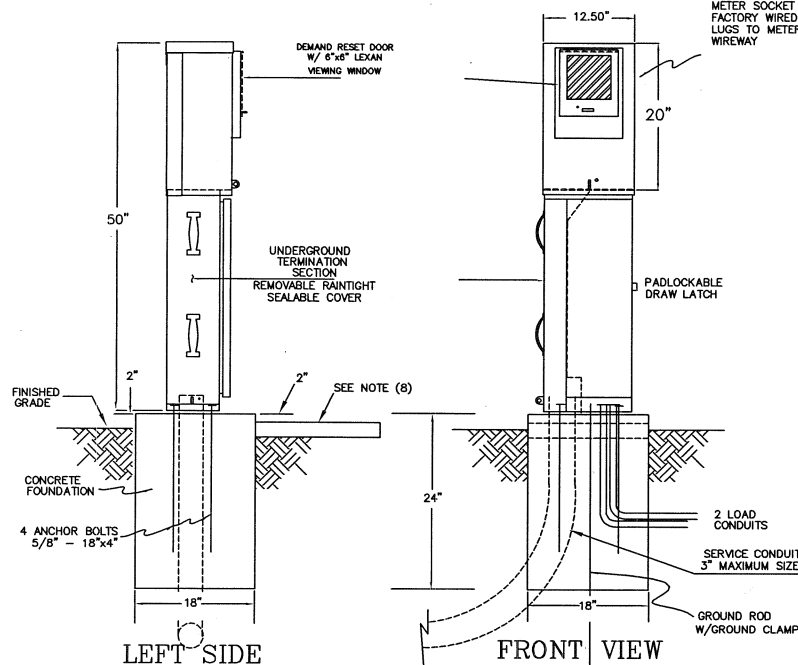
WORK PROCEDURES

1. CONTRACTOR SHALL WORK WITH THE ASSIGNED TRAFFIC SIGNAL TECHNICIAN FOR INSPECTIONS, MATERIAL, AND OTHER JOB RELATED PROBLEMS.
2. CONTRACTOR INSPECTION AND MATERIAL REQUESTS SHALL BE SUBMITTED 24 HOURS PRIOR TO THE INSPECTION OR MATERIAL PICK-UP.
3. INSPECTIONS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
 - A.) BEFORE STARTING PROJECT.
 - B.) BEFORE FILLING PULL BOX HOLES WITH AGGREGATE.
 - C.) BEFORE BACKFILLING TRENCHES AND BORE PITS AND BEFORE COVERING CONDUIT.
 - D.) WHEN POLE FOUNDATIONS ARE READY TO BE POURED WITH CONCRETE.
 - E.) WHILE POURING FOUNDATIONS.
 - F.) WHEN PROJECT IS COMPLETED (PROJECT IS COMPLETE WHEN FINAL INSPECTION IS APPROVED AND BILL HAS BEEN SUBMITTED).
4. ALL TRAFFIC SIGNAL HEAD ASSEMBLIES SHALL BE INSPECTED PRIOR TO THE INSTALLATION BY THE CONTRACTOR.

WORKSITE SAFETY

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE CITY OF MESA TRAFFIC BARRICADE MANUAL FOR ANY WORK INSIDE THE CITY LIMITS.
2. CONTRACTOR SHALL PROVIDE APPROVED WORKSITE BARRICADING AND OTHER SAFETY MEASURES AS NECESSARY TO PROTECT THE PUBLIC FROM TRENCHES AND OTHER WORK SITE HAZARDS DURING WORKING AND NON-WORKING HOURS.
3. CONTRACTOR SHALL COVER ALL HOLES WITH PLYWOOD. A LIGHTED TYPE I OR TYPE II BARRICADE WILL BE SET ON THE PLYWOOD. CONTRACTOR SHALL USE AT LEAST A 4' X 4' X 3/4" PIECE OF PLYWOOD. NO OTHER MATERIALS FOR COVERING HOLES WILL BE ACCEPTED.
4. CONTRACTOR SHALL BARRICADE ALL CONCRETE FOUNDATIONS WITH A TYPE I OR TYPE II LIGHTED BARRICADE UNTIL POLE IS SET.
5. CONTRACTOR SHALL NOT LEAVE ANY CONSTRUCTION MATERIAL IN THE ROADWAY, ON THE SIDEWALK, OR AT ANY OTHER LOCATION THAT MAY IMPEDE SAFE VEHICLE AND PEDESTRIAN MOVEMENT.
6. CONTRACTOR SHALL LEAVE A SECURE AND SAFE CONSTRUCTION SITE WHEN FINISHED WITH WORK FOR THE DAY. A SAFE CONSTRUCTION SITE IS THE CONTRACTOR'S RESPONSIBILITY.
7. EMPLOYEES OF THE CONTRACTOR SHALL USE REASONABLE SAFETY PROCEDURES WHILE WORKING. REASONABLE SAFETY PROCEDURES SHALL INCLUDE, BUT NOT BE LIMITED TO THE USE OF, SAFETY HATS, GLOVES, GOGGLES, REFLECTIVE VESTS, AND A SAFETY HARNESS WHEN WORKING IN A BUCKET TRUCK.

METERING SECTION HOOD
FRONT-TOP & SIDES HINGED



BASE PLAN
SCALE: NONE

DIMENSIONS ARE - $\frac{1}{8}$ " INCHES, (###) MILLIMETER

METER SOCKET (100 AMP MIN.)
FACTORY WIRED FROM LINE LANDING
LUGS TO METER SOCKET IN A SEPARATE
WIREWAY

LANDING LUGS
#6-250MCM
AL/CU

LEFT SIDE
HOOD OPEN
COVER REMOVED

Underwriters Laboratories Inc.
File No.

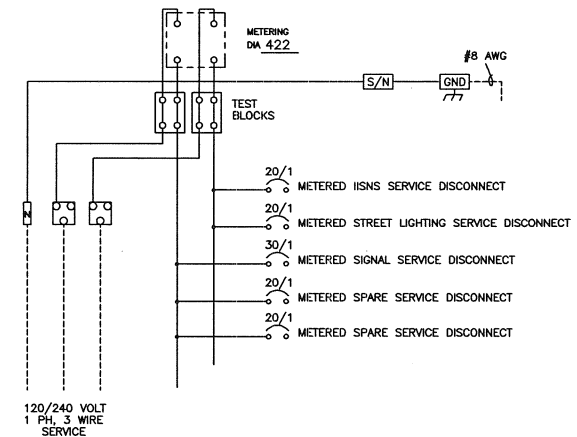
INDUSTRIAL CONTROL PANEL					
VOLTAGE	PHASE	WIRING	WIRE	WIRE	WIRE
120/240	1	3	30	50	
SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN					
AMPERES		VOLTAGE			
22,000		240		V	
METER SOCKET RATING: 100 A CONT. ENCLOSURE: 100					

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
2. SEE PLANS FOR CONDUIT SIZE, LOCATION, AND QUANTITY.
3. UNSTABLE SOIL MAY REQUIRE A DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS.
4. ANCHOR BOLTS SHALL BE GALVANIZED STEEL, 5/8" x 18" x 4", COMPLETE WITH NUTS AND WASHERS.
5. ANCHOR BOLTS SHALL PROJECT A MINIMUM OF 1" AND A MAXIMUM OF 1 1/2" ABOVE FOUNDATION.
6. CONDUIT SHALL PROJECT A MINIMUM OF 2" AND A MAXIMUM OF 4" ABOVE THE FOUNDATION, EXCEPT FOR CONDUIT FOR GROUND ROD, WHICH SHALL BE FLUSH.
7. USE SILICONE CAULK TO SEAL GAP BETWEEN CABINET AND FOUNDATION.
8. A RAISED PCC PAD 18" x 4" x 24" SHALL BE PLACED IN FRONT OF CABINET. PAD SHALL BE SET 2" BELOW THE FOUNDATION ELEVATION. SLOPE PAD AWAY FROM CABINET.
9. ALL CABINET FOUNDATIONS SHALL HAVE A 5/8" INCH x 10 FOOT BONDED GROUND ROD. GROUND ROD SHALL BE INSTALLED BEFORE FOUNDATION IS POURED.

ENCLOSURE CONSTRUCTION NOTES

1. FABRICATED FROM 12S ALUM AND INTERIOR 14 GA. GOLD ROLLED STEEL. ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
2. CONSTRUCTION WILL BE NEMA 3R. RAINLIGHT.
3. ALL NUTS, BOLTS, SCREWS AND HINGES WILL BE STAINLESS STEEL.
4. NUTS, BOLTS & SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. PHENOLIC NAMEPLATES WILL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
8. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
9. RAW ALUM



TRAFFIC SIGNAL FULLY METERED SERVICE PEDESTAL

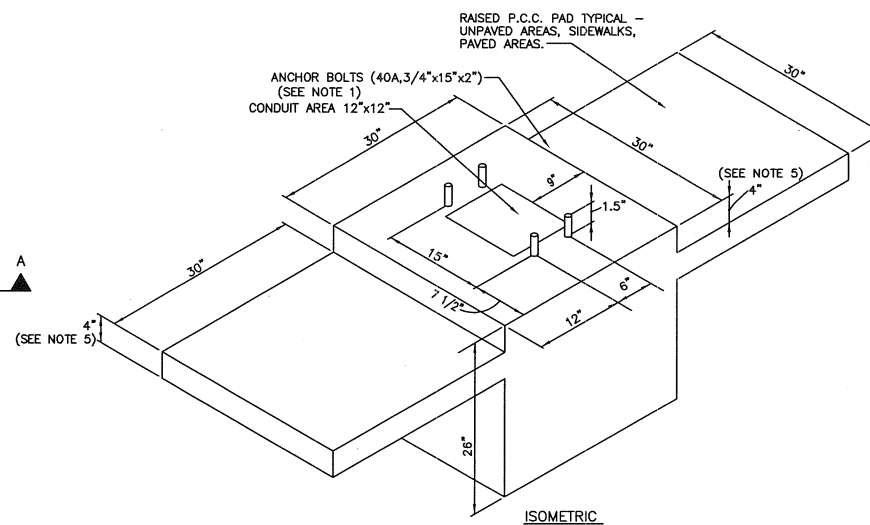
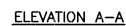
DETAIL NO.
M-91.1



1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
2. SEE PLANS FOR CONDUIT SIZE, LOCATION, AND QUANTITY.
3. UNSTABLE SOIL MAY REQUIRE A DEEPER FOUNDATION: SEE ADDT SPECIFICATIONS.
4. ANCHOR BOLTS SHALL BE GALVANIZED STEEL, 3/4" x 11" x 5", COMPLETE WITH NUTS AND WASHERS.
5. ANCHOR BOLTS SHALL PROJECT A MINIMUM OF 1" AND A MAXIMUM OF 1 1/2" ABOVE FOUNDATION.
6. CONDUIT SHALL PROJECT A MINIMUM OF 2" AND A MAXIMUM OF 4" ABOVE THE FOUNDATION, EXCEPT FOR CONDUIT FOR GROUND ROD, WHICH SHALL BE FLUSH WITH SURFACE.
7. USE SILICONE CAULK TO SEAL GAP BETWEEN CABINET AND FOUNDATION.
8. IN UNPAVED AREAS A RAISED PCP PAD 36" x 4 x 50" SHALL BE PLACED IN FRONT OF CABINET. PAD SHALL BE 1/2" BELOW THE FINISH GRADE ELEVATION. SLOPE PAD AWAY FROM CABINET.
9. ALL CABINET FOUNDATIONS SHALL HAVE A 5/8 INCH x 10 FOOT BONDED GROUND ROD. GROUND ROD SHALL BE INSTALLED BEFORE FOUNDATION IS POURED.
10. 2 - 2" SPARE PVC CONDUITS SHALL BE INSTALLED IN THE FOUNDATIONS. STUB OUT A MINIMUM OF 3' AND CAP THE ENDS. TRAFFIC SIGNAL INSPECTOR SHALL BE ABLE TO ORIENT THE 1" SPARE CONDUITS.

TRAFFIC SIGNAL CABINET FOUNDATION

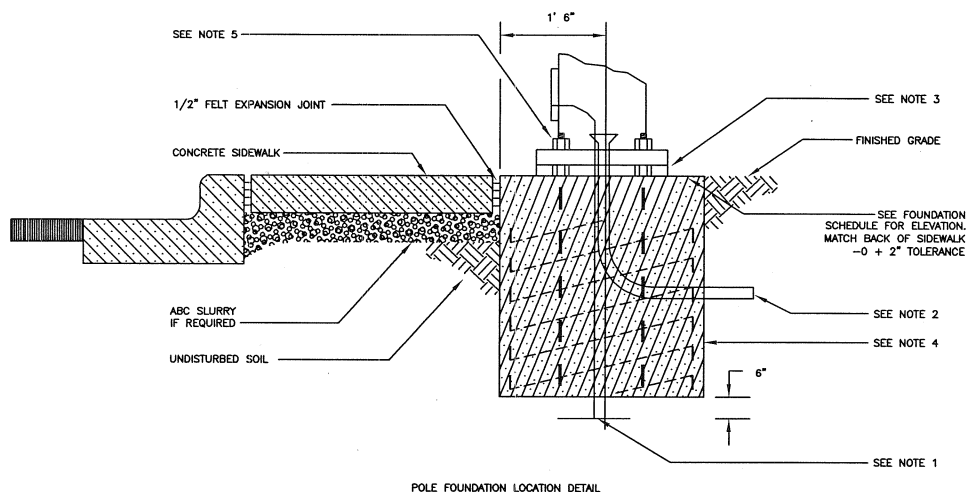
DETAIL NO.
M-92.1



1. ALL CONDUITS AND ANCHOR BOLTS SHALL BE RIGIDLY INSTALLED BEFORE CONCRETE IS PLACED.
2. TOP OF PAD TO BE SLOPED TO DRAIN.
3. DUCT SEAL SHALL BE APPLIED AT CONDUIT ENTRANCES.
4. A WATERTIGHT SEAL SHALL BE APPLIED ALONG THE INSIDE AND OUTSIDE EDGES OF THE CABINET WHERE IT ABUTTS TO THE CONCRETE PAD.
5. 4" IS NOMINAL DIMENSION. 2"x4" FORMS ARE ACCEPTABLE EXCEPT WHERE OTHERWISE NOTED OR DIRECTED (EXPOSED CONCRETE SURFACES MAY BE FORMED BY OTHER MEANS FOR AN ACCEPTABLE FINISHED APPEARANCE).

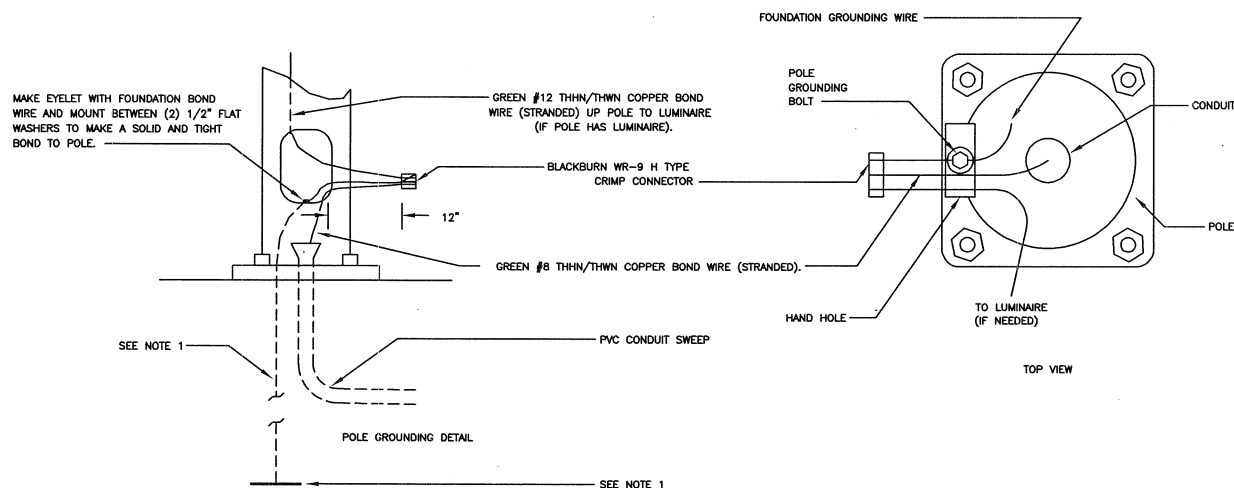
TRAFFIC SIGNAL U.P.S. FOUNDATION

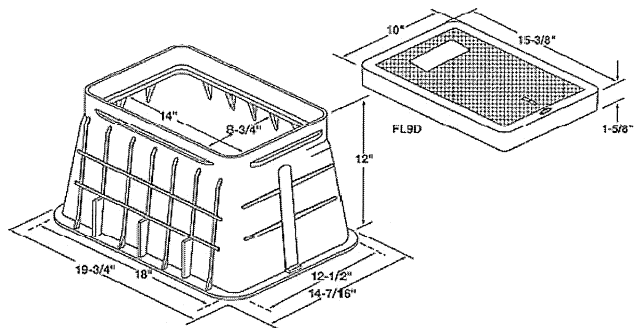
DETAIL NO.
M-92.2



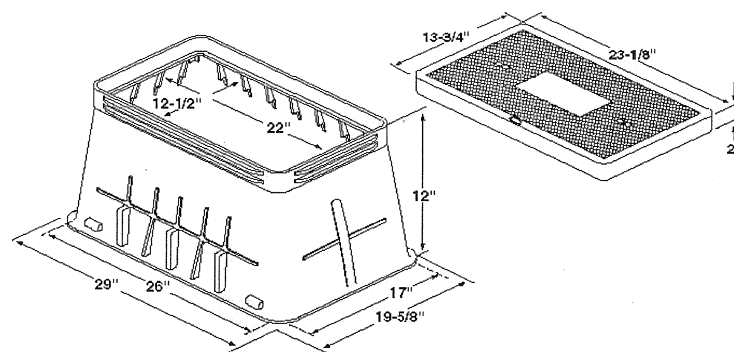
GENERAL NOTES:

1. A #8 XHHW INSULATED COPPER STRANDED BOND WIRE WITH A 14" COPPER GROUNDING PLATE (SEE M-73.6 FOR PLATE DETAIL) OR A 25' COIL OF #4 COPPER BARE BOND (SOLID OR STRANDED) COVERED WITH 6" FILL DIRT.
2. SCHEDULE 40 PVC 90 DEGREE CONDUIT BEND (SEE POLE DETAILS FOR CONDUIT SIZE) WITH A RADIUS OF NOT LESS THAN 18" (FACTORY BENDS ONLY). CONDUIT SHALL PROJECT A MINIMUM OF 2" AND A MAXIMUM OF 4" ABOVE THE FOUNDATION.
3. THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONCRETE POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS FOR GROUT.
4. CONCRETE FOUNDATIONS SHALL BE VIBRATED WITH A MECHANICAL VIBRATOR DURING CONCRETE POUR.
5. FOR J, K, Q, AND R POLES, THE ANCHOR BOLTS SHALL PROJECT 8 INCHES ABOVE THE FOUNDATION. ANCHOR BOLTS SHALL HAVE A MINIMUM 2 FULL THREAD ABOVE NUTS ON ALL POLES.

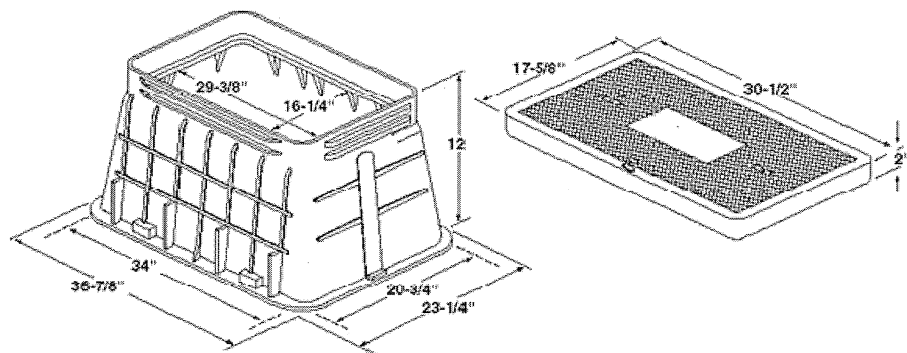




TRAFFIC SIGNAL NUMBER 3 1/2
(PULL BOX PART NUMBER FL9BOX, LID PART NUMBER FL9T)

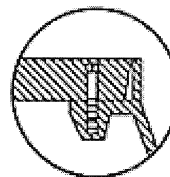


TRAFFIC SIGNAL NUMBER 5 1/2
(PULL BOX PART NUMBER FL30BOX12, LID PART NUMBER FL30T)



TRAFFIC SIGNAL NUMBER 7
(PULL BOX PART NUMBER FL36BOX12, LID PART NUMBER FL36T)

"T" Lids

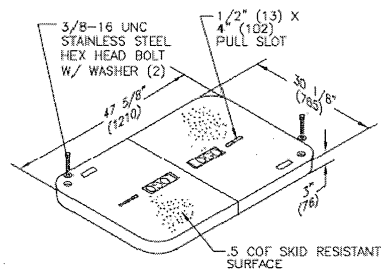
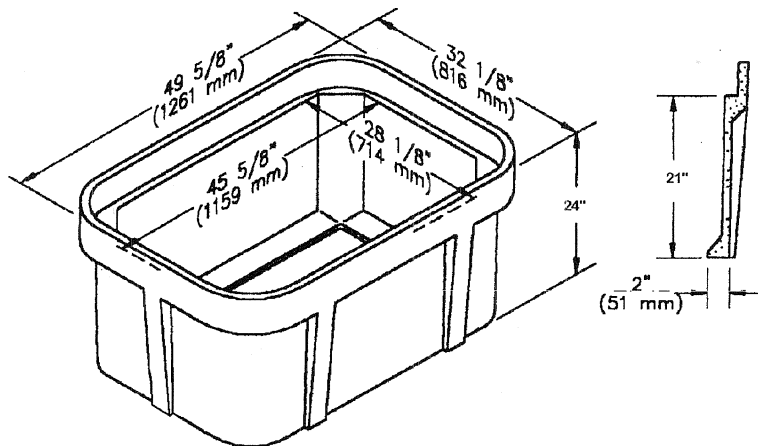


**Straight Type
Pentahead Bolt
For T Box**

HOLD DOWN BOLT DETAIL

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. ALL NUMBER 3 1/2, 5 1/2, AND 7 BOXES SHALL BE CHRISTY "FIBRELYTE." CONCRETE BOXES AND LIDS SHALL NOT BE USED.
3. COVER LETTERING SHALL BE 1" LETTERS, CAST IN STANDARD MARKINGS "TRAFFIC SIGNALS".
4. REFER TO M-93.2 FOR PROPER INSTALLATION.
5. NUMBER 7 PULL BOX LID SHALL BE #7 CHRISTY "FIBRELYTE" PART NUMBER FL36T.
6. NUMBER 7 PULL BOX SHALL BE CHRISTY "FIBRELYTE" PART NUMBER FL36BOX12.
7. NUMBER 7 PULL BOX EXTENSIONS SHALL BE 2 EACH CHRISTY "FIBRELYTE" PART NUMBER FL36X8.

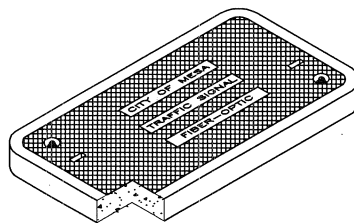


GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. ALL NUMBER 9 PULL BOXES SHALL BE STRONGWELL "QUAZITE" POLYMER CONCRETE.
3. REFER TO M-93.3 FOR PROPER INSTALLATION.
4. PULL BOX COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS "CITY OF MESA TRAFFIC SIGNAL FIBER-OPTIC". THE PULL BOX COVER WILL BE SECURED WITH "5 POINT" SECURITY BOLT.
5. NUMBER 7 PULL BOX LID SHALL BE #7 CHRISTY "FIBERELYTE" PART NUMBER FL36T.
6. NUMBER 9 PULL BOX LID SHALL BE STRONGWELL "QUAZITE" PART NUMBER PG3048CS00.
7. NUMBER 9 PULL BOX SHALL BE STRONGWELL "QUAZITE" PART NUMBER PG3048BA24.

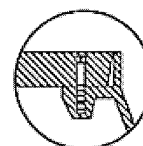
TRAFFIC SIGNAL NUMBER 9

(PULL BOX PART NUMBER PG3048BA24, 2 PIECE LID PART NUMBER PG3048CS00, SEE NOTE 4 FOR LETTERING)
(IF CALLED FOR THE EXTENSION PART NUMBER IS THE SAME AS THE PULL BOX PART NUMBER)



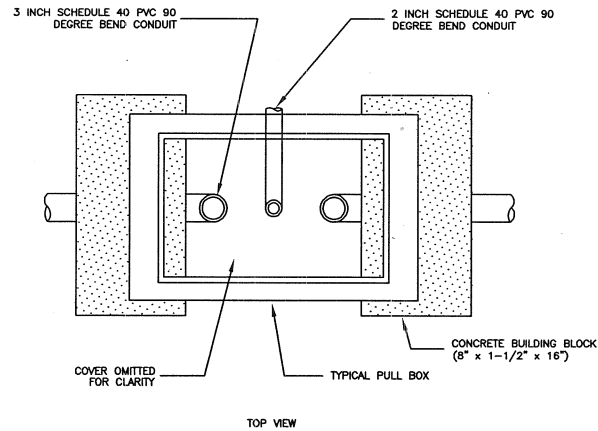
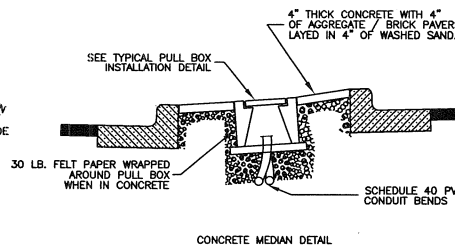
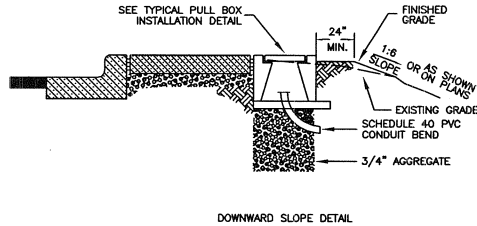
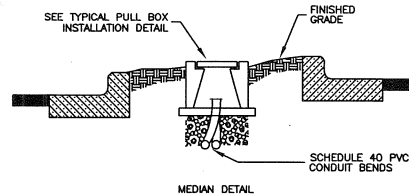
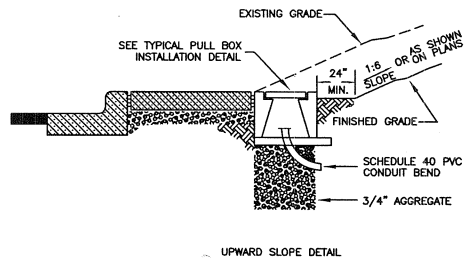
#7 PULL BOX LID DETAIL (SEE NOTE 4)

"T" Lids



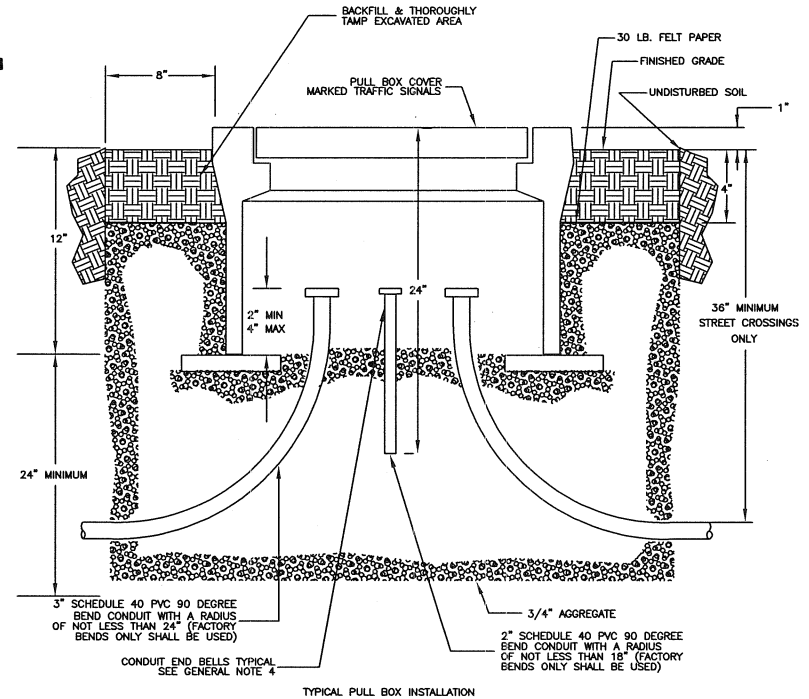
Straight Type
Pentahead Bolt
For T Box

HOLD DOWN BOLT DETAIL



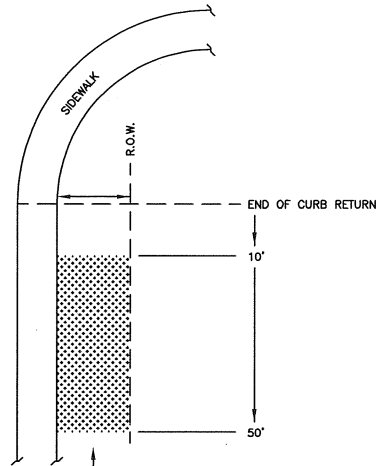
GENERAL NOTES:

1. ALL FINISHED TRAFFIC SIGNAL EQUIPMENT (POLE FOUNDATIONS, PULL BOXES, AND CONTROLLER CABINET PADS) SHALL BE AT BACK OF SIDEWALK GRADE, UNLESS OTHERWISE NOTED ON PLANS.
2. WHEN TRAFFIC SIGNAL EQUIPMENT (POLES, PULL BOXES, AND CONTROLLER CABINETS) ARE INSTALLED IN AN UPWARD SLOPE SECTION, THE PROJECT ENGINEER SHALL DESIGN A RETAINING WALL OR CUT BACK EXISTING GRADE TO OBTAIN A LEVEL AREA FOR AT LEAST 24 INCHES FROM THE TRAFFIC SIGNAL EQUIPMENT. THE SLOPE OF THE FINISHED GRADE SHALL NOT EXCEED A 1:6 SLOPE AND SHALL MATCH AND CONFORM TO THE EXISTING TERRAIN.
3. WHEN TRAFFIC SIGNAL EQUIPMENT (POLES, PULL BOXES, AND CABINETS) ARE INSTALLED IN A DOWNWARD SLOPE SECTION, NEEDED DIRT SHALL BE HAULED IN TO OBTAIN A LEVEL AREA FOR AT LEAST 24 INCHES FROM THE TRAFFIC SIGNAL EQUIPMENT. THE SLOPE OF THE FINISHED GRADE SHALL NOT EXCEED A 1:6 SLOPE AND SHALL MATCH AND CONFORM TO THE EXISTING TERRAIN.
4. CONDUIT END BELLS SHALL BE INSTALLED BEFORE PULLING WIRE.
5. BACKFILL WITH EXCAVATED MATERIALS AND THOROUGHLY TAMP PER M.A.G. STANDARD 601.
6. FINISH GRADE SHALL BE 1" DOWN FROM TOP OF BOX. ANY PAVEMENT OR SIDEWALK SHALL BE FLUSH WITH TOP OF BOX.



MORSE CODE MARKING DETAIL (WHITE TAPE)

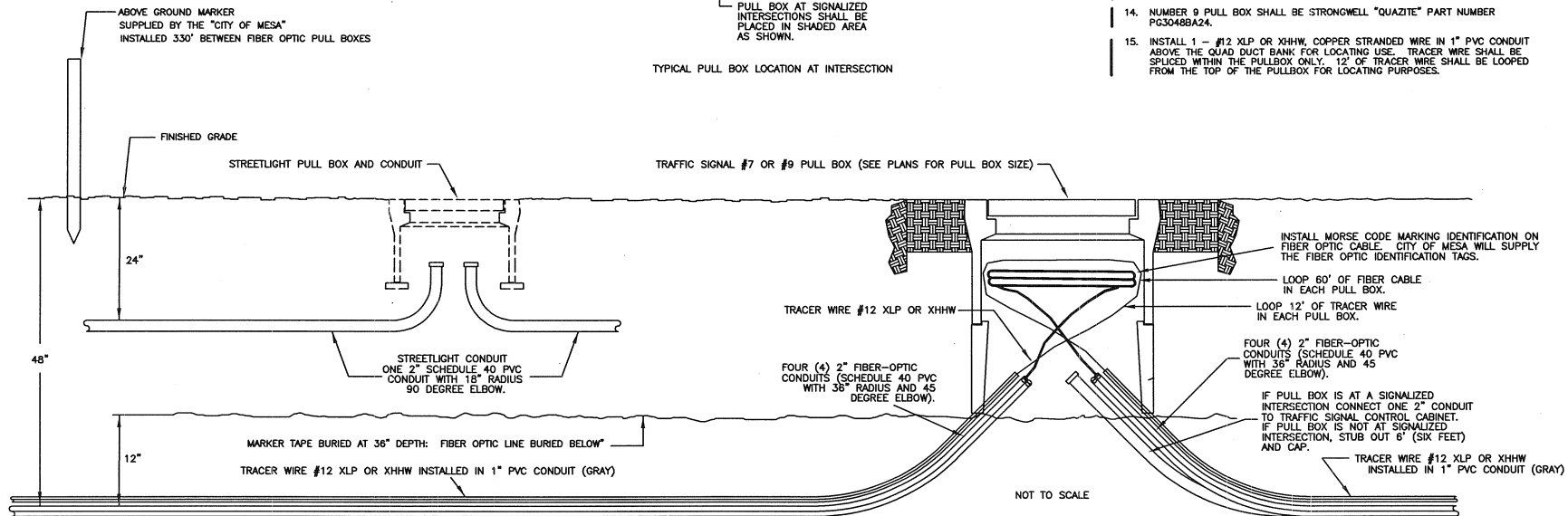
NORTH (N)	— — — —
EAST (E)	— — — —
SOUTH (S)	— — — —
WEST (W)	— — — —
TRAFFIC SIGNAL (TS)	— — — —



TYPICAL PULL BOX LOCATION AT INTERSECTION

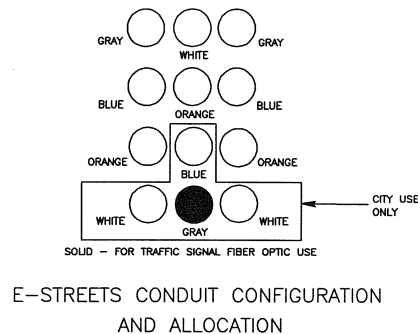
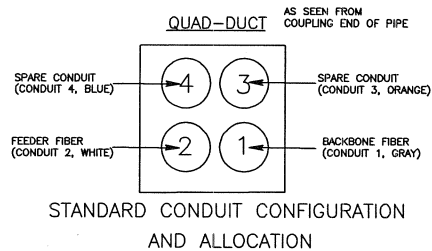
GENERAL NOTES:

1. WHEN NEW STREETLIGHT CONDUIT IS BEING INSTALLED, THE CONDUITS FOR THE FIBEROPTIC CABLE SHALL SHARE A COMMON TRENCH WITH THE STREETLIGHT CONDUIT.
2. REFER TO PLANS FOR PULLBOX SIZE TO USE.
3. REFER TO M-93.1 SHEET 1 & 2 FOR PULLBOXES.
4. REFER TO M-93.2 FOR PULL BOX INSTALLATION.
5. PULL BOX COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS "CITY OF MESA TRAFFIC SIGNAL FIBER-OPTIC". THE PULL BOX COVER WILL BE SECURED WITH "S POINT" SECURITY BOLT, REFER TO M-93.1.
6. PULL BOXES SHALL BE SPACED APPROXIMATELY 660' APART
7. CABLE SHALL BE AS SPECIFIED ON DETAIL M-97.0 OR APPROVED EQUAL.
8. CABLE SHALL BE INSTALLED AS ONE CONTINUOUS PIECE WITH NO SPLICES.
9. A MINIMUM OF ONE (1) GALLON OF WIRE PULLING "SOAP" SHALL BE USED PER 660' WHEN PULLING CABLE.
10. CONDUITS FOR FIBER SYSTEM SHALL BE BLOWN OUT WITH COMPRESSED AIR AND HAVE A METAL DISK MANDREL PULLED THROUGH BEFORE FIBER CABLE MANDREL PROCEDURE. A TRAFFIC SIGNAL TECHNICIAN SHALL BE ON SITE DURING MANDREL PROCEDURE.
11. ALL FOUR CONDUITS OF THE QUAD DUCT BANK SHALL CONTAIN A MULE TAPE OF 1500LB TENSILE STRENGTH. THE MULE TAPE ENDS SHALL BE TIED OFF TO PREVENT THE ENDS FROM INADVERTENTLY BEING PULLED BACK INTO THE CONDUITS. CAP ALL UNUSED AND FUTURE CONDUITS WITH A TAPERED PVC PLUG.
12. CONTRACTOR SHALL PERFORM AN "OTDR" (OPTICAL TIME-DOMAIN REFLECTOMETER) TEST ON ALL FIBERS WITH THE TRAFFIC SIGNAL INSPECTOR PRESENT BEFORE FINAL ACCEPTANCE. OPERATOR SHALL BE QUALIFIED TO PERFORM TEST. WRITTEN TEST RESULTS SHALL BE PROVIDED TO INSPECTOR AS TO RESULTS OF EACH FIBER TESTED.
13. NUMBER 9 PULL BOX LID SHALL BE STRONGWELL "QUAZITE" PART NUMBER PG3048CS00.
14. NUMBER 9 PULL BOX SHALL BE STRONGWELL "QUAZITE" PART NUMBER PG3048BA24.
15. INSTALL 1 - #12 XLP OR XHHW, COPPER STRANDED WIRE IN 1" PVC CONDUIT ABOVE THE QUAD DUCT BANK FOR LOCATING USE. TRACER WIRE SHALL BE SPLICED WITHIN THE PULLBOX ONLY. 12' OF TRACER WIRE SHALL BE LOOPED FROM THE TOP OF THE PULLBOX FOR LOCATING PURPOSES.



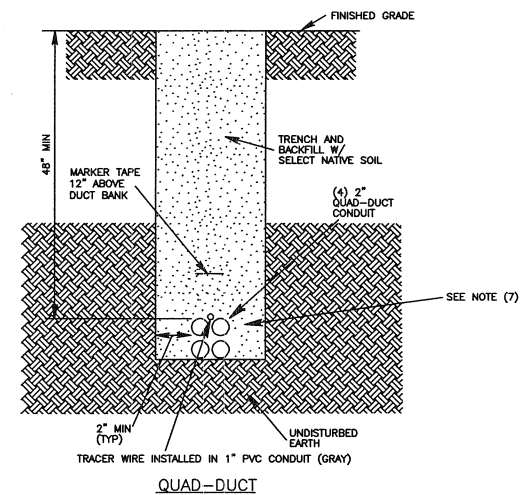
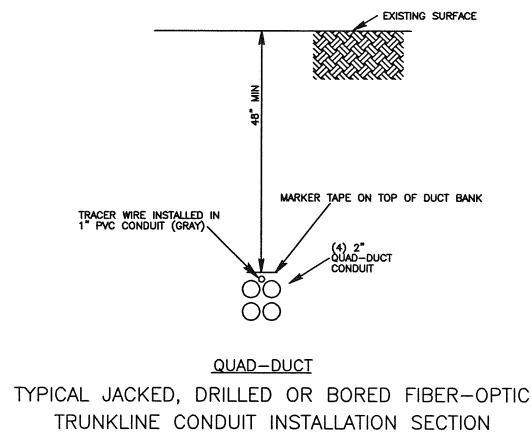
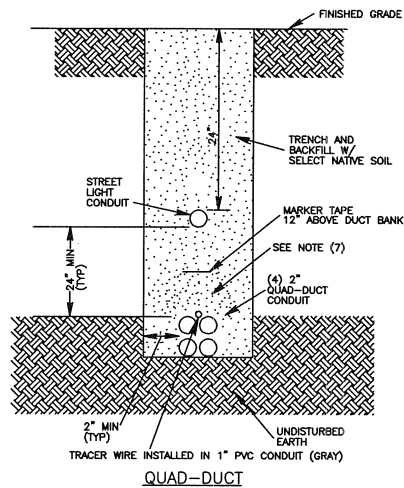
TRAFFIC SIGNAL FIBER-OPTIC INSTALLATION

DETAIL NO.
M-93.3



NOTES:

1. TRACER WIRE SHALL BE #12 XLP OR XHHW BLACK COPPER 7 STRAND WIRE. TRACER WIRE SHALL BE INSTALLED IN 1" PVC CONDUIT (GRAY) ON TOP OF THE QUAD DUCT BANK.
2. MARKER TAPE SHALL BE CENTERED OVER CONDUIT AND INSTALLED AT 12" ABOVE DUCT BANK. TAPE SHALL READ "FIBER OPTIC LINE BURIED BELOW." ONLY EXCEPTION (JACKED, DRILLED OR BORED) SEE DETAIL BELOW.
3. STREET LIGHT CONDUIT MAY DIFFER IN NUMBER AND SIZE FROM SHOWN. REFER TO LIGHTING PLANS FOR VERIFICATION.
4. WHEN NEW STREETLIGHT CONDUIT IS BEING INSTALLED, THE CONDUIT FOR THE FIBER-OPTIC CABLE SHALL SHARE A COMMON TRENCH WITH THE STREETLIGHT CONDUIT.
5. CONDUITS FOR FIBER SYSTEM SHALL BE BLOWN OUT WITH COMPRESSED AIR AND HAVE A METAL DISK MANDREL PULLED THROUGH BEFORE FIBER CABLE IS INSTALLED. A TRAFFIC SIGNAL TECHNICIAN SHALL BE ON SITE DURING MANDREL PROCEDURE.
6. QUAD DUCT BANK SHALL BE 2" SCHEDULE 40 PVC OR 2" HDPE IN A GUIDED BORE INSTALL. EACH CELL OF CONDUIT SHALL BE DIFFERENT COLOR. SEE STANDARD CONDUIT CONFIGURATION AND ALLOCATION DETAIL.
7. BACKFILL WITH FILTERED BACKFILL MATERIAL TO A DEPTH OF 6" ABOVE THE QUAD DUCT BANK (SAND MAYBE USED). THE REMAINDER OF THE TRENCH CAN BE BACKFILLED WITH ORIGINAL EXCAVATED MATERIAL.
8. MAXIMUM CONDUIT DEFLECTION IS 1" PER FOOT.
9. MAINTAIN 12" MINIMUM CLEARANCE FROM OTHER UTILITIES, UNLESS OTHERWISE SPECIFIED BY UTILITY OWNER.
10. ALL SWEEPS SHALL BE 36" RADIUS AND SHALL BE FACTORY COLORED TO MATCH THE CONDUIT.
11. ALL FOUR CONDUITS OF THE QUAD DUCT BANK SHALL CONTAIN A MULE TAPE OF 1500LB TENSILE STRENGTH. THE MULE TAPE ENDS SHALL BE TIED OFF TO PREVENT THE ENDS FROM INADVERTENTLY BEING PULLED BACK INTO THE CONDUITS. CAP ALL UNUSED AND FUTURE CONDUITS WITH A TAPERED PVC PLUG.
12. THE CONDUIT ASSEMBLY SHALL ALWAYS BE INSTALLED IN THE TRENCH OR IN THE BORE SO THAT THE BLUE AND ORANGE DUCTS ARE ON THE TOP. THE COUPLING ENDS OF THE PIPE SHALL ALWAYS FACE EAST OR NORTH. THE CONTRACTOR SHALL FOLLOW THE ASSEMBLY INSTRUCTIONS AS RECOMMENDED BY THE MANUFACTURER OF THE CONDUIT ASSEMBLY, INCLUDING MANUFACTURER'S APPROVED CEMENT.



TYPICAL WATER & GAS LINES & THEIR VALVE LOCATIONS. VERIFY THE LOCATION OF EXISTING FIRE HYDRANTS, VALVES & OTHER UTILITIES PRIOR TO INSTALLING PVC.

TYP. INSTALLATION WITH ISLAND

2' +/- (TYP.)

VARIES

VARIES

2' +/-

1 - 3" PVC TYPICAL W/MEDIAN

1 - 3" PVC TYPICAL W/MEDIAN

2 - 3" PVC TYPICAL SEE NOTE 2

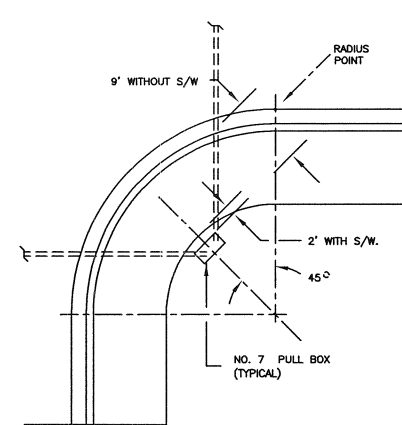
2 - 3" PVC CONDUITS TYPICAL INSTALLATION WITHOUT ISLAND

2 - 3" PVC IF INTERSECTING STREET

PULL BOX - SEE M-93.3 FOR INSTALLATION DETAILS.

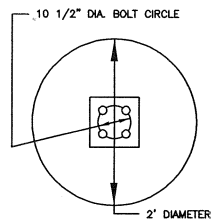
GENERAL NOTES:

1. INSTALL GREEN #8 THHN/THWN STRANDED COPPER WIRE FULL LENGTH INSIDE OF CONDUIT WITH THREE FEET (3') EXTENDING ABOVE CONDUIT. ALL BARE BONDS SHALL BE SPLICED TOGETHER FOR FUTURE LOCATING PURPOSES.
2. PVC SHALL BE SCHEDULE 40 ELECTRICAL CONDUIT.
3. DEPTH OF PVC INSTALLATION SHALL BE 36" MINIMUM (TYPICAL) BELOW TOP OF GUTTER AND RUN IN A HORIZONTAL PLANE FROM PULL BOX TO PULL BOX.
4. REFER TO M-93.1 AND M-93.2 FOR PULLBOX AND INSTALLATION DETAILS.

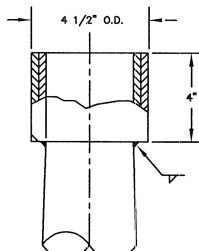


CONDUIT LAYOUT FOR FUTURE TRAFFIC SIGNALS

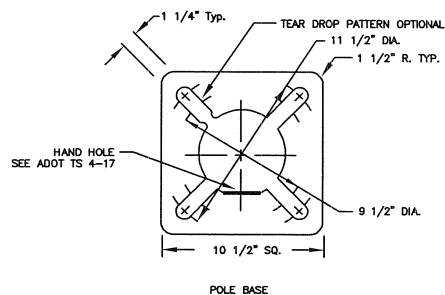
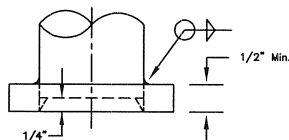
DETAIL NO.
M-93.5



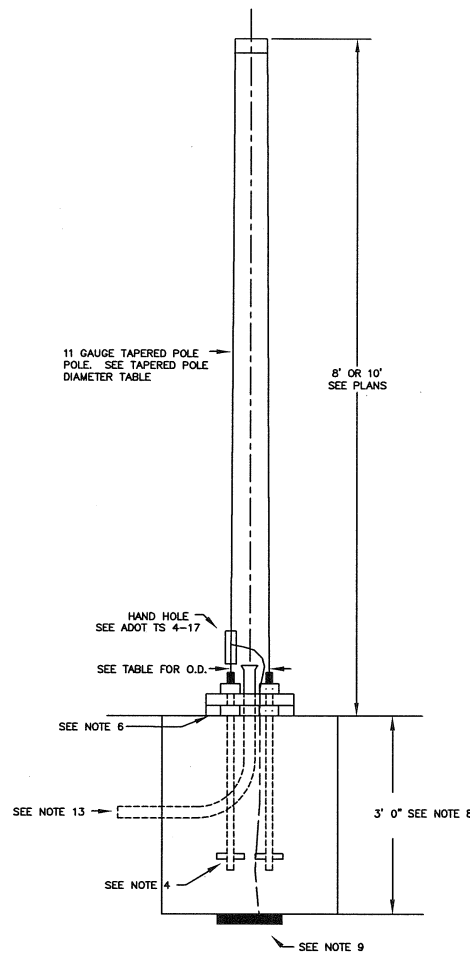
FOUNDATION PLAN



COLLAR DETAIL



POLE BASE



GENERAL NOTES:

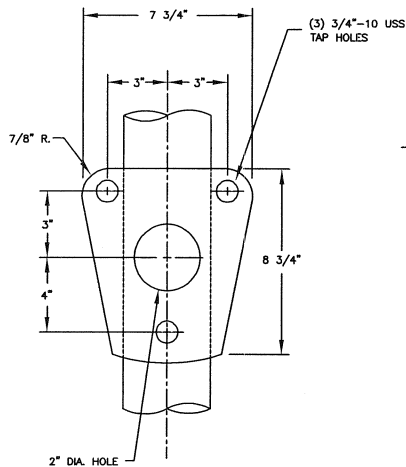
1. ALL DIMENSIONS ARE IN INCHES.
2. ALL "A" POLES SHALL BE OF THE TAPERED TYPE.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
4. SEE ADOT TS 4-20 DETAIL "B" FOR ANCHOR BOLT DETAILS. EACH ANCHOR BOLT SHALL HAVE FOUR HEX NUTS AND TWO FLAT WASHERS.
5. ANCHOR BOLTS SHALL PROJECT 3 1/2" ABOVE THE FOUNDATION.
6. THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONCRETE POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
7. CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 4".
8. UNSTABLE SOIL MAY REQUIRE A DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
9. GROUNDING AS SHOWN ON DETAIL M-92.3 NOTE 1 SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED AND CONNECTED TO POLE GROUNDING SCREW IN THE HAND HOLE.
10. THE FOUNDATION HOLE SHALL BE AUGERED AND CLASS "A" CONCRETE (3,000 PSI PER M.A.C. STANDARD 725) POURED AGAINST UNDISTURBED COMPACTED EARTH.
11. POLE FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
12. ALL SUPPORTS SHALL BE DESIGNED TO WITHSTAND 80 MPH WINDS PER AASHTO SPECIFICATIONS.
13. INSTALL 1 - 2" PVC CONDUIT IN FOUNDATION.
14. A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE POLE ABOVE THE HAND HOLE STATING THE MANUFACTURER'S NAME, C.O.M. POLE TYPE AND DATE MANUFACTURED.

TAPERED POLE DIAMETER TABLE

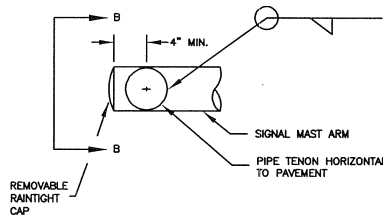
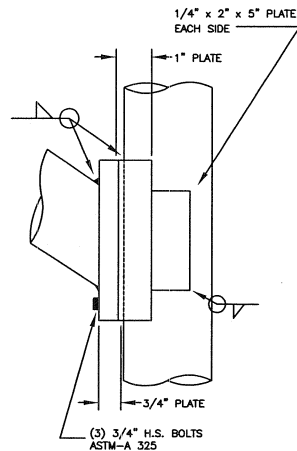
HEIGHT	BASE	TOP
8'-0"	5.2"	4.1"
10'-0"	5.5"	4.1"

CITY OF MESA TYPE "A" POLE

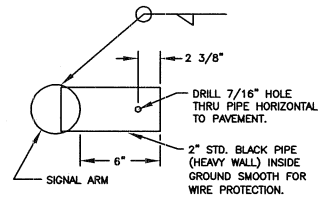
DETAIL NO.
M-94.1



DETAIL "A"

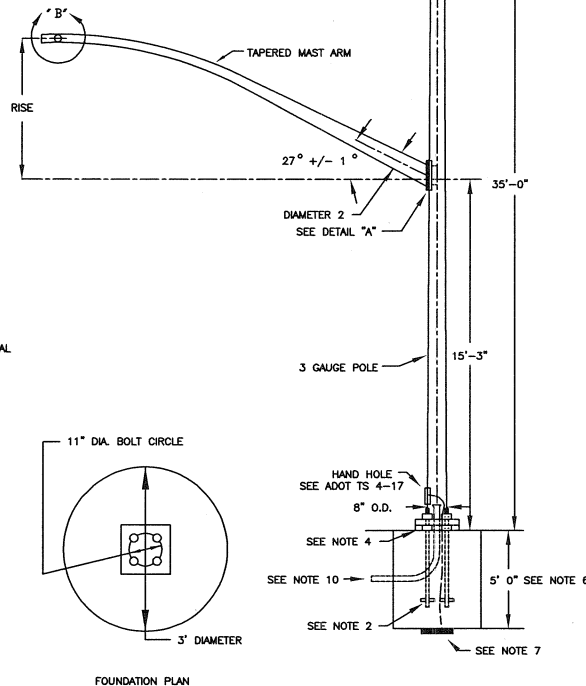


DETAIL "B"



SECTION "B-B"

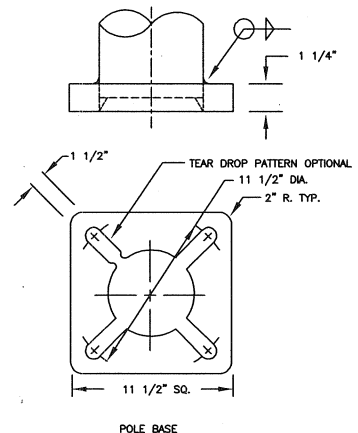
MAST ARM INFORMATION						
Lgth.	Rise	Ga.	DIAMETER 1 MINIMUM	DIAMETER 2 MINIMUM	Ga.	DIAMETER 1 & DIAMETER 2 MINIMUMS
6'	2' 0"	11	3 1/4"	---	10	3 3/8"
8'	2' 6"	11	3 1/2"	---	10	3 5/8"
10'	3' 4"	11	3 13/16"	---	10	3 7/8"
12'	4' 3"	11	4 1/16"	4 15/16"	10	4 5/16"
15'	4' 9"	11	4 1/4"	5 5/16"	10	4 3/4"
18'	5' 9"	11	5 3/4"	5 13/16"	10	5 3/16"
20'	5' 9"	7	5 1/4"	5 1/4"	7	5 1/4"



FOUNDATION PLAN

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
2. SEE ADOT TS 4-20 DETAIL "B" FOR ANCHOR BOLT DETAILS. ANCHOR BOLTS SHALL BE 1-1/4" X 52" EACH ANCHOR BOLT SHALL HAVE FOUR HEX NUTS AND TWO FLAT WASHERS.
3. ANCHOR BOLTS SHALL PROJECT 5 1/2" ABOVE THE FOUNDATION.
4. THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONCRETE POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION SECTION 731- 3.01.
5. CONDUIT SHALL PROJECT A MINIMUM OF 4" ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 6".
6. UNSTABLE SOIL MAY REQUIRE A DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION SECTION 731- 3.01.
7. GROUNDING AS SHOWN ON DETAIL M-92.3 NOTE 1 SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED AND CONNECTED TO POLE GROUNDING SCREW IN THE HAND HOLE.
8. THE FOUNDATION HOLE SHALL BE AUGERED AND CLASS "A" CONCRETE (3,000 PSI PER M.A.G. STANDARD 725) POURED AGAINST UNDISTURBED COMPACTED EARTH.
9. POLE FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
10. INSTALL 1 - 3" PVC CONDUIT IN FOUNDATION.
11. ALL SUPPORTS SHALL BE DESIGNED TO WITHSTAND 80 MPH WINDS PER AASHTO SPECIFICATIONS.
12. A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE POLE ABOVE THE HAND HOLE STATING THE MANUFACTURER'S NAME, C.O.M. POLE TYPE AND DATE MANUFACTURED.

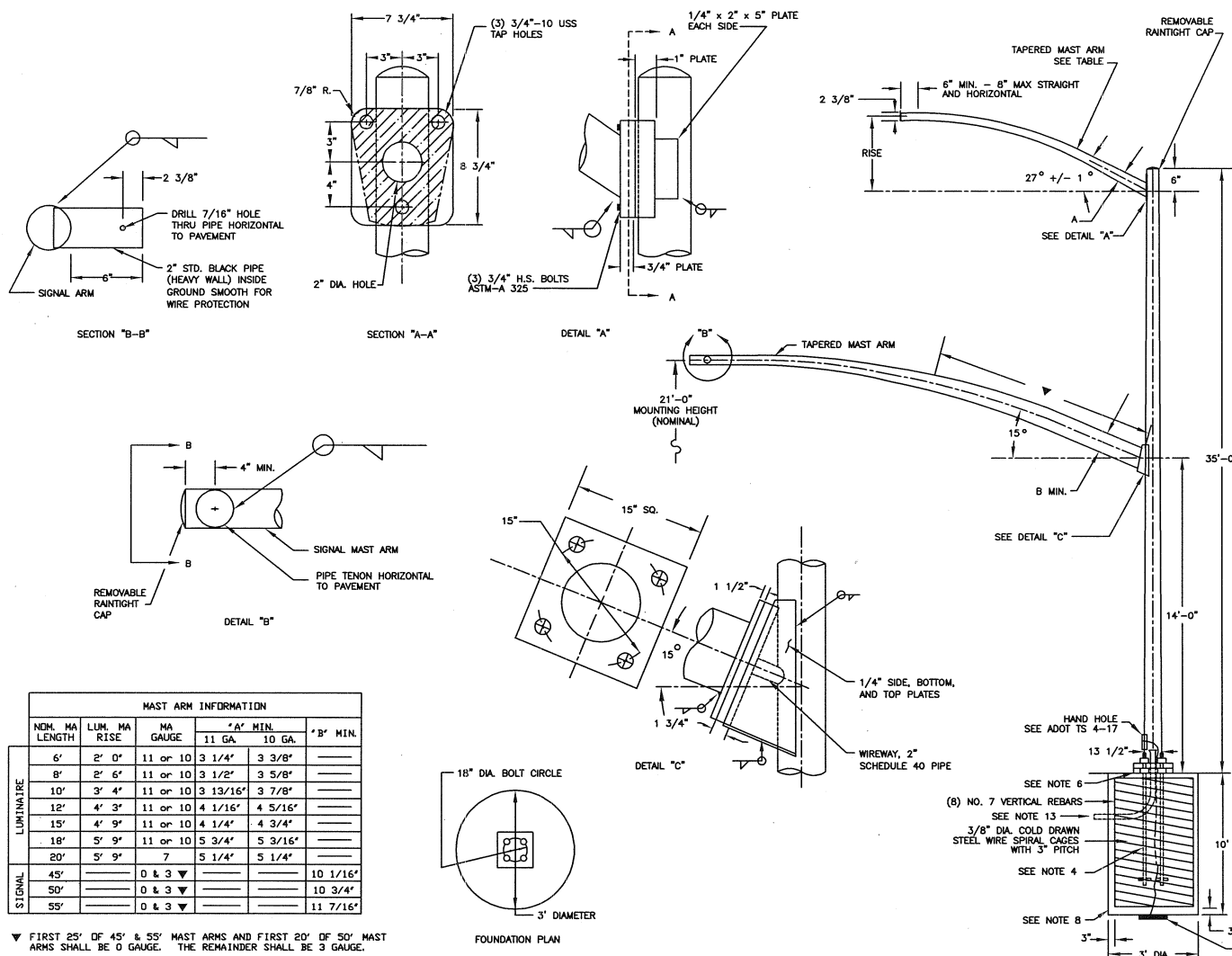


POLE BASE

CITY OF MESA TYPE "F" POLE

DETAIL NO.
M-94.2





GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
- THE POLE SHALL BE 0 GAUGE TAPERED STEEL. ALTERNATE: THE TOP FIFTEEN FEET OF POLE MAY BE 10 OR 11 GAUGE.
- FOUR 1 1/4" - 7 HIGH STRENGTH BOLTS (ASTM A-325) ARE REQUIRED FOR SIGNAL MAST ARMS.
- SEE ADOT TS 4-20 DETAIL "B" FOR ANCHOR BOLT DETAILS. ANCHOR BOLTS SHALL BE 2" X 70" EACH ANCHOR BOLT SHALL HAVE FOUR HEX NUTS AND TWO FLAT WASHERS.
- ANCHOR BOLTS SHALL PROJECT 8 INCHES ABOVE THE FOUNDATION.
- THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONCRETE POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
- CONDUIT SHALL PROJECT A MINIMUM OF 4 INCHES ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 6 INCHES.
- THE FOUNDATION HOLE SHALL BE AUGERED AND CLASS "A" CONCRETE (3,000 PSI PER M.A.G. STANDARD 725) POURED AGAINST UNDISTURBED COMPACTED EARTH.
- UNSTABLE SOIL MAY REQUIRE DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
- GROUNDING AS SHOWN ON DETAIL M-92.3 NOTE 1 CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED AND CONNECTED TO POLE GROUNDING SCREW IN THE HAND HOLE.
- FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
- FOR TENON SPACING REFER TO M-94.7.
- INSTALL 1 - 3" PVC CONDUIT IN FOUNDATION.
- ALL SUPPORTS SHALL BE DESIGNED TO WITHSTAND 80 MPH WINDS PER AASHTO SPECIFICATIONS.
- ADDITIONAL LOAD OF INTERNALLY ILLUMINATED SIGN AS SHOWN ON M-98.1 SHALL BE CONSIDERED.
- A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE POLE ABOVE THE HAND HOLE STATING THE MANUFACTURER'S NAME, C.O.M. POLE TYPE AND DATE MANUFACTURED.



SIGNAL



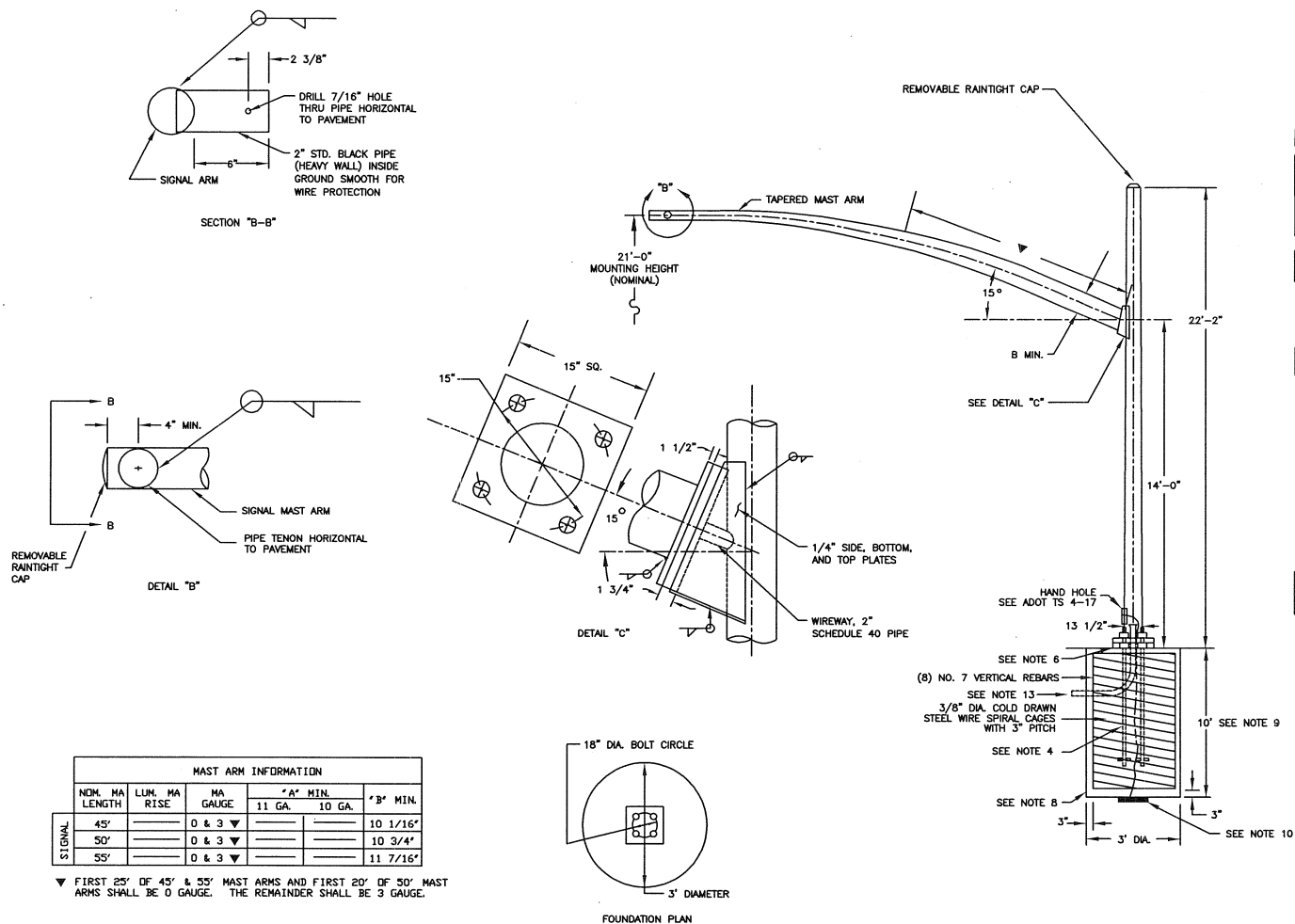
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
2. THE POLE SHALL BE 3 GAUGE TAPERED STEEL.
3. FOUR 1 1/4" - 7 HIGH STRENGTH BOLTS (ASTM A-325) ARE REQUIRED FOR SIGNAL MAST ARMS.
4. SEE ADOT TS 4-20 DETAIL "B" FOR ANCHOR BOLT DETAILS. ANCHOR BOLTS SHALL BE 2" X 70" EACH ANCHOR BOLT SHALL HAVE FOUR HOT NUTS AND TWO FLAT WASHERS.
5. ANCHOR BOLTS SHALL PROJECT 8 INCHES ABOVE THE FOUNDATION.
6. THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONDUIT POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
7. CONDUIT SHALL PROJECT A MINIMUM OF 4 INCHES ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 8 INCHES.
8. THE FOUNDATION HOLE SHALL BE AUGERED AND CLASS "A" CONCRETE (3,000 PSI PER M.A.G. STANDARD 725) POURED AGAINST UNDISTURBED COMPACTED EARTH.
9. UNSTABLE SOIL MAY REQUIRE DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
10. GROUNDING AS SHOWN ON DETAIL M-92.3 NOTE 1 SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED AND CONNECTED TO POLE GROUNDING SCREW IN THE HAND HOLE.
11. FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
12. FOR TENON SPACING REFER TO M-94.7.
13. INSTALL 1 - 3" PVC CONDUIT IN FOUNDATION.
14. ALL SUPPORTS SHALL BE DESIGNED TO WITHSTAND 80 MPH WINDS PER ASHTO SPECIFICATIONS.
15. ADDITIONAL LOAD OF INTERNALLY ILLUMINATED SIGN AS SHOWN ON M-98.1 SHALL BE CONSIDERED.
16. A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE POLE ABOVE THE HAND HOLE STATING THE MANUFACTURER'S NAME, C.O.M. POLE TYPE AND DATE MANUFACTURED.

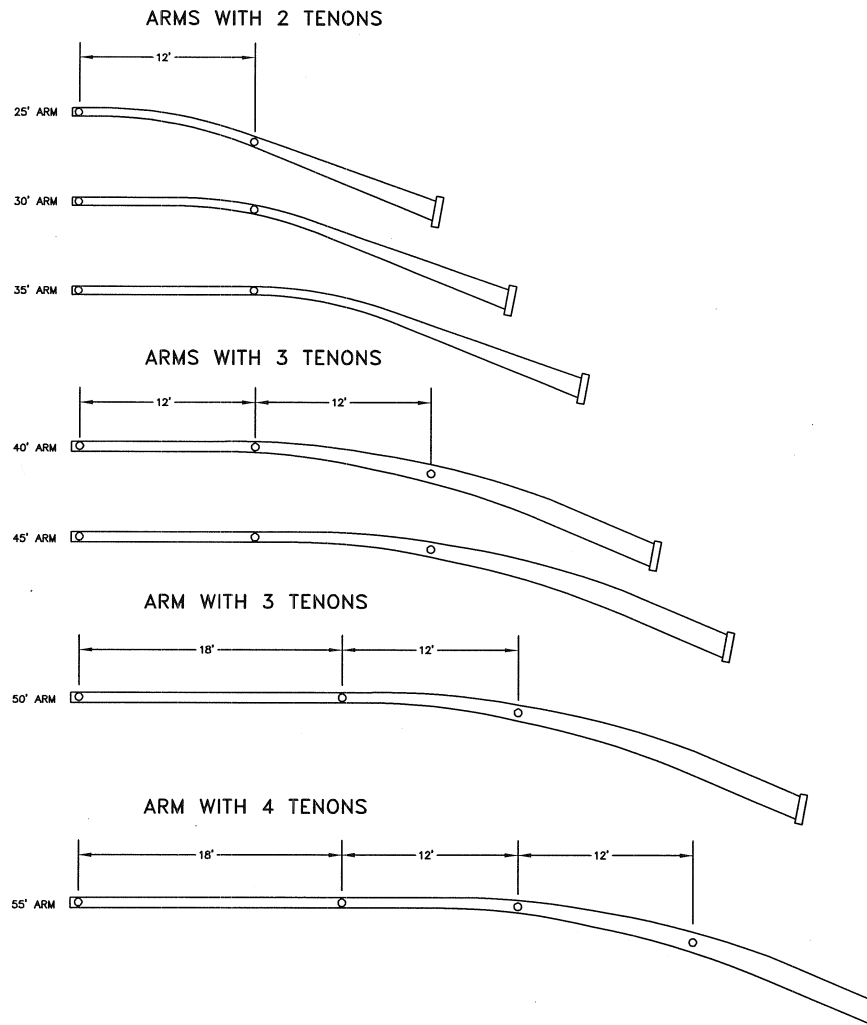
CITY OF MESA MODIFIED TYPE "J" POLE

DETAIL NO.
M-94.5

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
2. THE POLE SHALL BE 0 GAUGE TAPERED STEEL.
3. FOUR 1 1/4" x 7 HIGH STRENGTH BOLTS (ASTM A-325) ARE REQUIRED FOR SIGNAL MAST ARMS.
4. SEE ADOT TS 4-20 DETAIL "B" FOR ANCHOR BOLT DETAILS. ANCHOR BOLTS SHALL BE 2" x 70" EACH ANCHOR BOLT SHALL HAVE FOUR HEX NUTS AND TWO FLAT WASHERS.
5. ANCHOR BOLTS SHALL PROJECT 8 INCHES ABOVE THE FOUNDATION.
6. THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONCRETE POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01
7. CONDUIT SHALL PROJECT A MINIMUM OF 4 INCHES ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 6 INCHES.
8. THE FOUNDATION HOLE SHALL BE AUGERED AND CLASS "A" CONCRETE (3,000 PSI PER M.A.G. STANDARD 725) POURED AGAINST UNDISTURBED COMPACTED EARTH.
9. UNSTABLE SOIL MAY REQUIRE DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01
10. GROUNDING AS SHOWN ON DETAIL M-92.3 NOTE 1 CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED AND CONNECTED TO POLE GROUNDING SCREW IN THE HAND HOLE.
11. FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
12. FOR TENON SPACING REFER TO M-94.7.
13. INSTALL 1 - 3" PVC CONDUIT IN FOUNDATION.
14. ALL SUPPORTS SHALL BE DESIGNED TO WITHSTAND 80 MPH WINDS PER AASHTO SPECIFICATIONS.
15. ADDITIONAL LOAD OF INTERNALLY ILLUMINATED SIGN AS SHOWN ON M-98.1 SHALL BE CONSIDERED.
16. A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE POLE ABOVE THE HAND HOLE STATING THE MANUFACTURER'S NAME, C.O.M. POLE TYPE AND DATE MANUFACTURED.





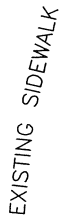
GENERAL NOTES:

1. ARM FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
2. SPACINGS SHOWN ARE USED UNLESS OTHERWISE SPECIFIED ON PLANS.
3. 25', 30', AND 35' ARMS HAVE 2 TENONS.
4. 40', 45', AND 50' ARMS HAVE 3 TENONS.
5. 55' ARMS HAVE 4 TENONS.
6. A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE BOTTOM SIDE OF THE MAST ARM, 2" TO 4" FROM BASE. THE TAG SHALL HAVE THE FOLLOWING INFORMATION: MANUFACTURER'S NAME, C.O.M. ARM TYPE AND DATE MANUFACTURED.

MAST ARM TENON SPACING

DETAIL NO.
M-94.7

FIGURE A



- POINT OF RETURN

- EXISTING/OTHER POLE
TYPICAL LOCATION

SIDEWALK INSTALLATION
PER M.A.G. 340

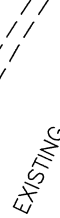
ADD SIDEWALK
TO MAINTAIN
CLEAR SIDEWALK
BETWEEN BASE
PLATE AND BACK
OF WALK.

POINT OF RETURN

- BIKE PUSH
BUTTON POLE

W=EXISTING SIDEWALK WIDTH

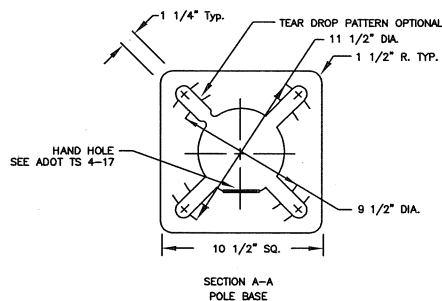
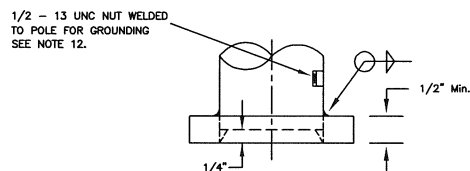
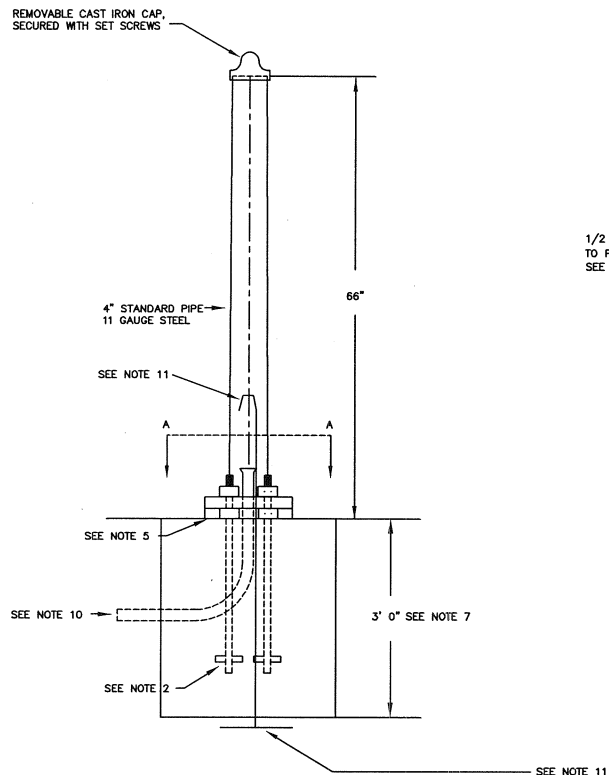
EXISTING
SIDEWALK



1. BOTTOM OF BASE PLATE TO BE FLUSH WITH TOP OF SIDEWALK.
2. INSTALL BIKE PUSH BUTTON FOR BICYCLISTS WITH C POLE 2' BEHIND FACE OF CURB.
3. PUSH BUTTON SHALL FACE CURB.
4. PUSH BUTTON STATION SHALL BE AS DESCRIBED ON M-90.1.
5. PUSH BUTTON STATION PLACARD SHALL BE AS SHOWN ON M-99.1.
6. FOR PUSH BUTTON STATION INSTALLATION REFER TO M-95.1.
7. REFER TO M-94.1 FOR FOUNDATION DETAILS.
8. FOR SIDEWALK CONSTRUCTION REFER TO M.A.G. STANDARD DETAIL 230.

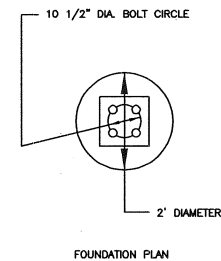
BIKE PUSH BUTTON INSTALLATION

DETAIL NO.
M-94.8



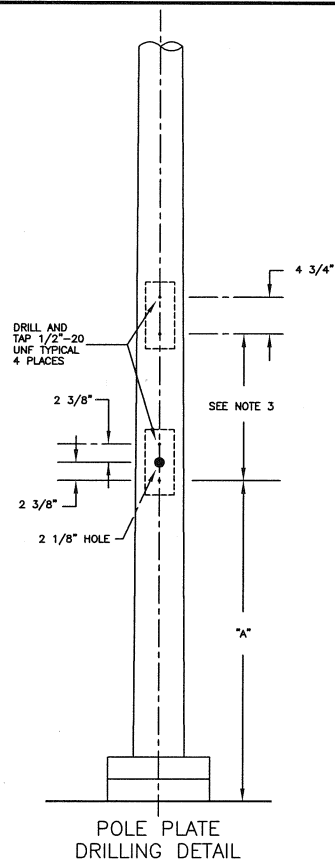
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. SEE ADOT TS 4-20 DETAIL "B" FOR ANCHOR BOLT DETAILS. ANCHOR BOLTS SHALL BE 1" X 35". EACH ANCHOR BOLT SHALL HAVE FOUR HEX NUTS AND TWO FLAT WASHERS.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
4. ANCHOR BOLTS SHALL PROJECT 3 1/2" ABOVE THE FINISHED SIDEWALK.
5. THE LEVELING NUTS SHALL BE INSTALLED ON TOP OF CONCRETE POLE BASE. SPACE BETWEEN CONCRETE POLE BASE AND POLE BASE AROUND LEVELING NUTS SHALL BE GROUTED WITH A WEEP HOLE. THE WEEP HOLE SHALL BE CONSTRUCTED OF 1/2" COTTON ROPE AND BE ORIENTED ON THE OPPOSITE SIDE OF THE POLE FROM THE STREET. SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
6. CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 4".
7. UNSTABLE SOIL MAY REQUIRE A DEEPER FOUNDATION: SEE ADOT SPECIFICATIONS, ROAD AND BRIDGE CONSTRUCTION, SECTION 731- 3.01.
8. SEE M-95.1 FOR PUSH BUTTON POLE DRILLING DETAILS.
9. POLE FINISH TO BE GALVANIZED UNLESS OTHERWISE SPECIFIED ON PLANS.
10. INSTALL A SINGLE 2" PVC CONDUIT IN FOUNDATION.
11. A #8 XHHW INSULATED COPPER STRANDED BOND WIRE WITH A 14" COPPER GROUNDING PLATE (SEE M-73.6 FOR PLATE DETAIL) OR A 25' COIL OF #4 COPPER BARE BOND (SOLID OR STRANDED) COVERED WITH 6" FILL DIRT.
12. GROUNDING AS SHOWN ON DETAIL M-92.3. NOTE 1. BOND WIRE SHALL BE CONNECTED TO THE GROUND NUT INSIDE OF POLE, BEFORE POLE IS INSTALLED.
13. A STAINLESS STEEL TAG SHALL BE PERMANENTLY ATTACHED TO THE POLE 4" ABOVE THE POLE BASE STATING THE MANUFACTURER'S NAME, C.O.M. POLE TYPE AND DATE MANUFACTURED.

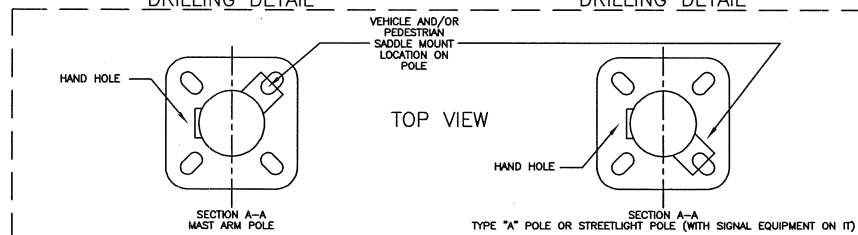
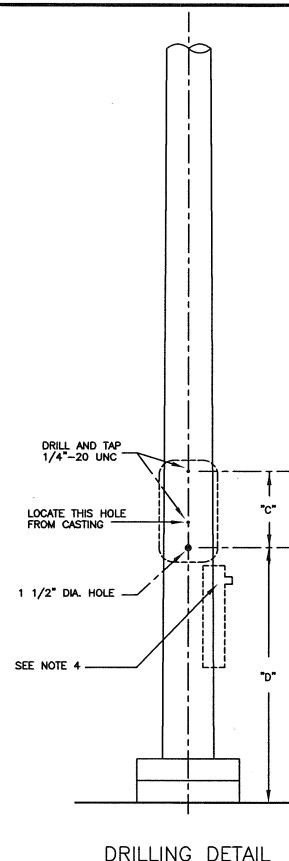
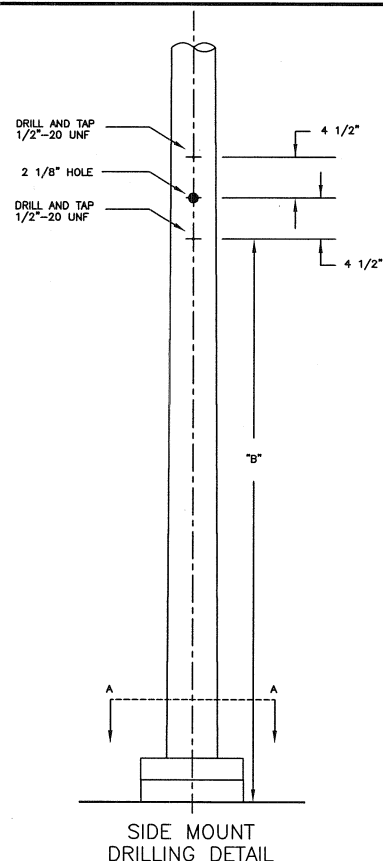


CITY OF MESA BICYCLE/PEDESTRIAN POLE

DETAIL NO.
M-94.9



COM STANDARD SADDLE
MOUNT ON ALL POLES
UNLESS NOTED OTHERWISE

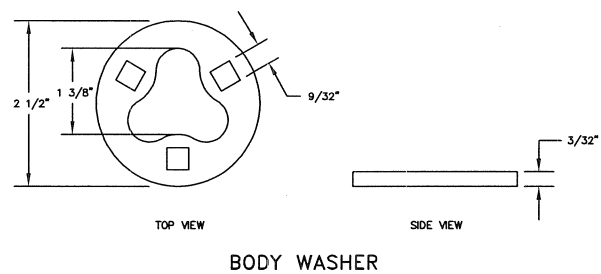
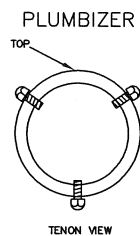
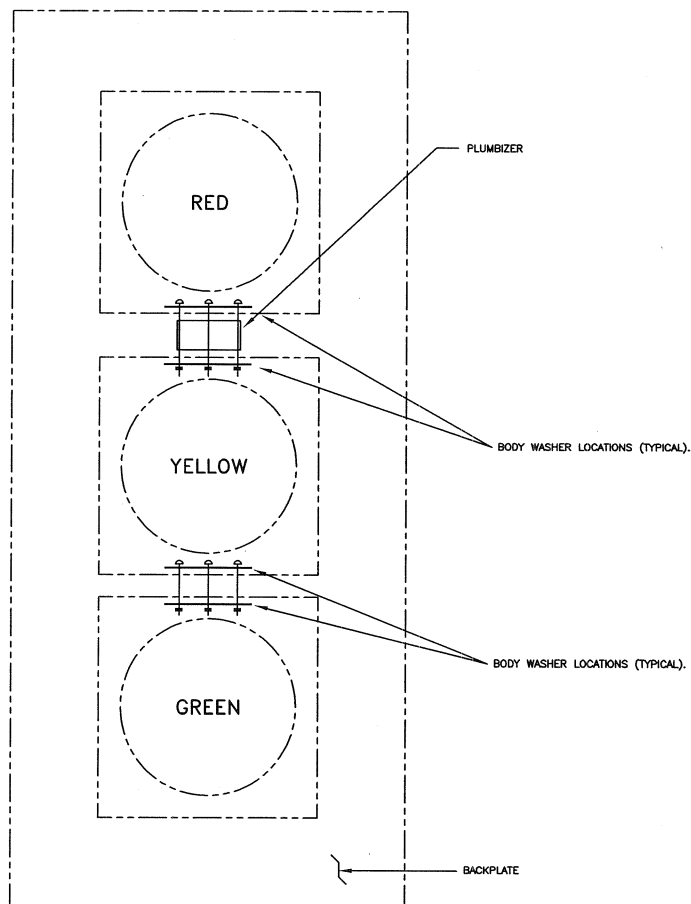


GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. DRILLING OF POLE TO BE ORIENTED ACCORDING TO TRAFFIC SIGNAL PLAN, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
3. TOP MOUNTING HOLES TO BE FIELD DRILLED IN ORDER TO ALLOW FOR MANUFACTURING VARIATIONS.
4. WHEN TWO PUSH BUTTON STATIONS ARE MOUNTED ON A SMALL DIAMETER POLE, THE LOWER CASTING SHALL HAVE ITS BUTTON ON TOP.
5. ON "A" POLES THE HAND HOLE SHALL BE ORIENTED TO FACE THE NEAREST SIDEWALK, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

ITEM	DIM "A"	DIM "B"
NEON PEDESTRIAN SIGNAL	87"	87"
ILLUMINATED MESSAGE	87"	
TERMINAL COMPARTMENT	125"	125"
STANDARD SIGNAL	125"	125"
C	125"	125"
F	125"	125"
Q	125"	125"

ITEM	DIM "C"	DIM "D"
ADA PEDESTRIAN BUTTON	11 3/8"	42"
BIKE BUTTON	11 3/8"	36"

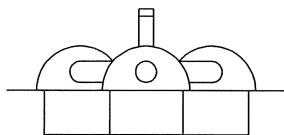


GENERAL NOTES:

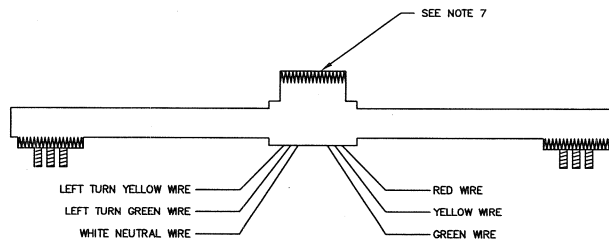
- HEADS SHALL BE DESIGNED TO WITHSTAND 80 MPH WINDS.
- BODY WASHERS SHALL BE USED BETWEEN ALL HEAD SECTIONS. BODY WASHERS SHALL BE OF THE TYPE SHOWN. ROUND CENTER HOLE WASHERS ARE NOT ACCEPTABLE. WASHERS SHALL BE MADE OF STAINLESS STEEL OR ZINC PLATED STEEL.
- ALL SIGNAL INDICATIONS SHALL BE I.E.D.

SIGNAL HEAD ASSEMBLY

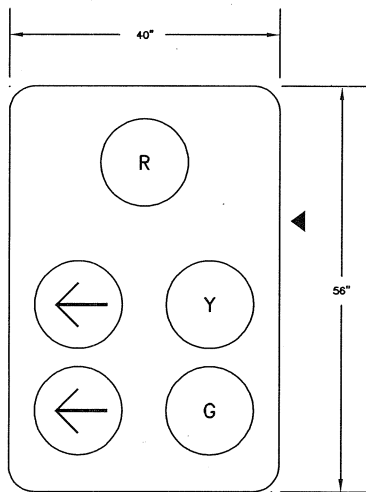
DETAIL NO.
M-95.2



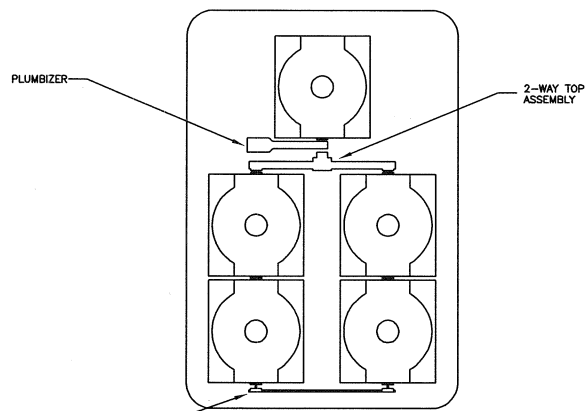
TOP VIEW



2-WAY TOP ASSEMBLY WIRING DETAIL



FRONT VIEW



BACK VIEW

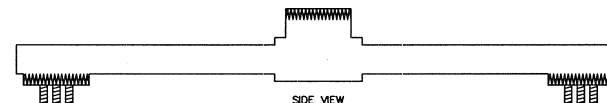
HEAD ASSEMBLY

GENERAL NOTES:

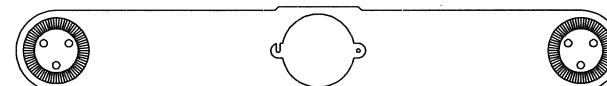
1. ALL DIMENSIONS SHOWN ARE NOMINAL AND ARE IN INCHES.
2. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.
3. "DOG LEG" PLUMBIZER TO BE PROVIDED. STRAIGHT PLUMBIZER IS NOT TO BE USED.
4. BACKPLATES SHALL BE CONSTRUCTED WITH NO OPEN GAPS BETWEEN BACKING PLATE SECTIONS OR NEXT TO HEAD. BACKPLATES SHALL BE MADE OF NO MORE THAN THREE PIECES.
5. HEADS SHALL BE FACTORY PRE-WIRED. THE NEUTRAL WIRE SHALL BE LOOPED BETWEEN THE TWO SIDES OF THE SIGNAL HEAD AND ONLY ONE NEUTRAL SHALL BE BROUGHT OUT TO THE SPlicing COMPARTMENT. WIRE SHALL BE 16 AWG THW PER ADOT 733-2.04. WIRE SHALL EXTEND PAST THE SPlicing COMPARTMENT OPENING BY 6 INCHES.
6. SPlicing COMPARTMENT COVER SHALL BE DESIGNED SO THAT IT MAY BE FLIPPED OUT OF THE WAY AS SHOWN ON THE SPlicing COMPARTMENT COVER DETAIL.
7. STACKED WASHERS OR SPACERS SHALL NOT BE USED ON TOP OF THE 2-WAY TOP ASSEMBLY. THE 2-WAY TOP ASSEMBLY SHALL BE BUILT WITH SUFFICIENT TOP CLEARANCE SO THAT THE PLUMBIZER CAN BE PARALLEL OR PERPENDICULAR TO THE BACKPLATE.
8. ALL SIGNAL INDICATIONS SHALL BE I.E.D.



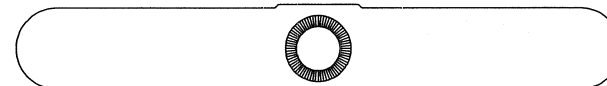
SPlicing COMPARTMENT COVER DETAIL



SIDE VIEW



BOTTOM VIEW



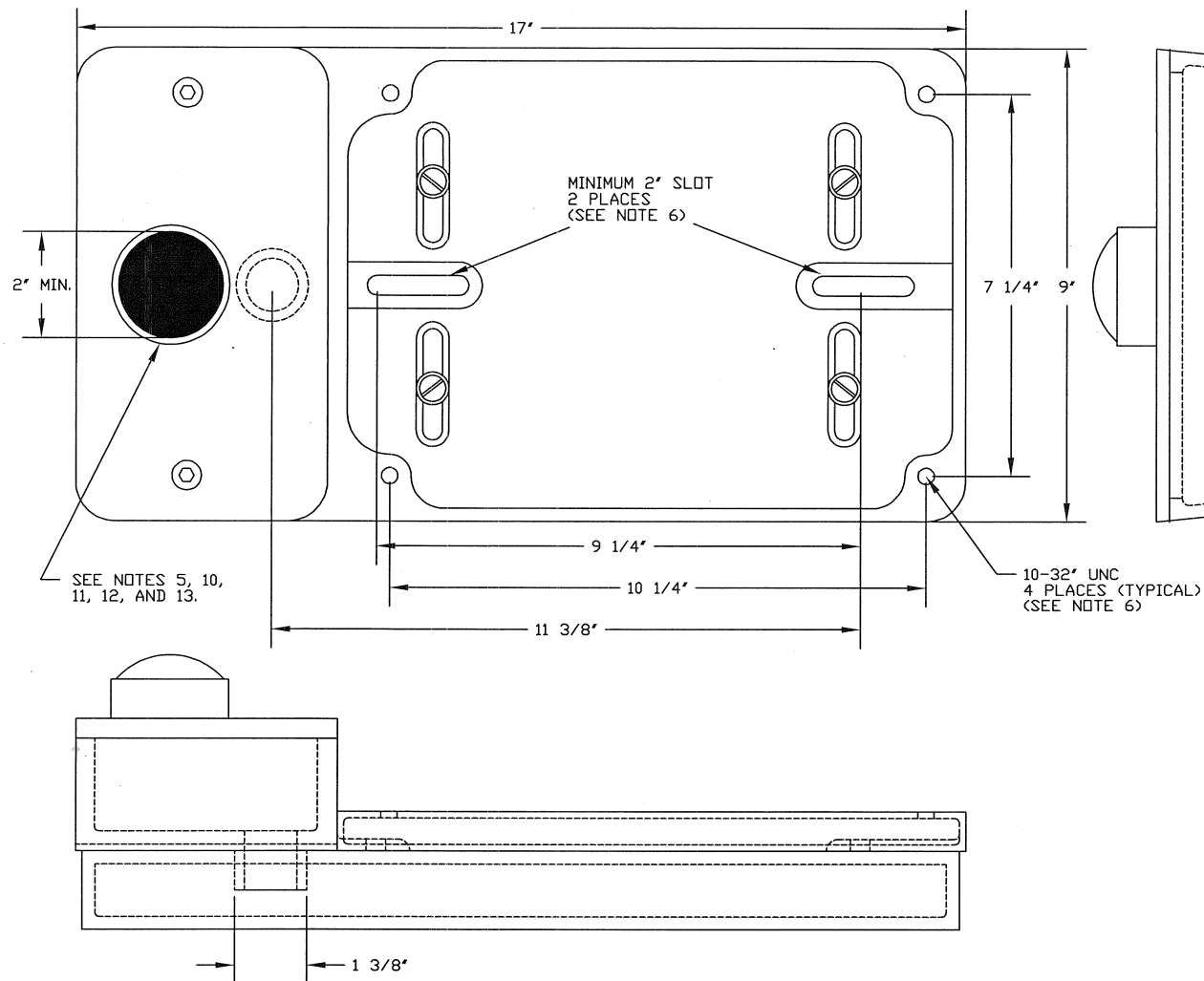
TOP VIEW

2-WAY TOP ASSEMBLY

◀ INDICATES LOCATION OF ELEVATOR PLUMBIZER FOR MAST ARM MOUNTS AS PER PLANS.

TYPE "S" CLUSTER HEAD

DETAIL NO.
M-95.3

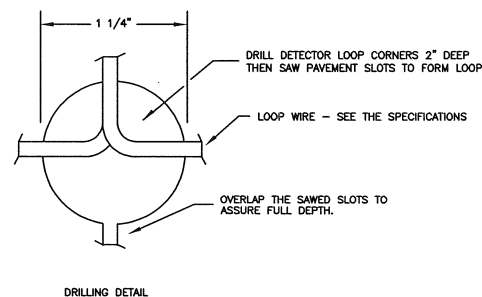
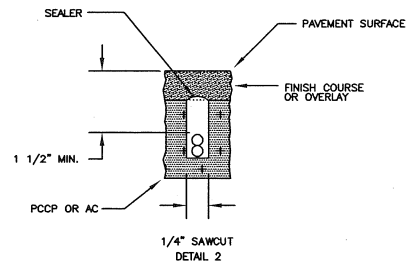
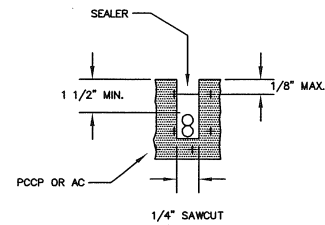
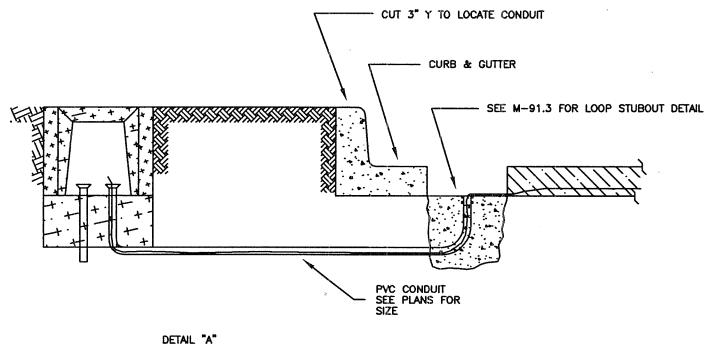
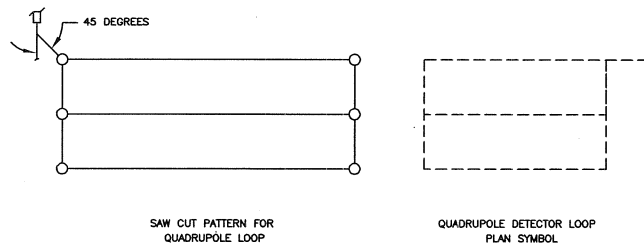
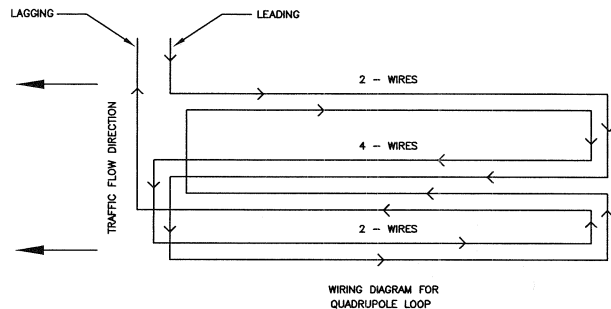


GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. TYPE I ADA PUSH BUTTON SHALL BE USED UNLESS OTHERWISE SPECIFIED.
3. HOUSING MATERIAL SHALL BE ALUMINUM ALLOY.
4. DIAMETER OF CASTING BACK TO CORRESPOND WITH POLE DIAMETER.
5. PUSH BUTTON SHALL CONTAIN A MOMENTARY CONTACT SWITCH. SEE M-90.1 FOR MICROSWITCH SPECIFICATION.
6. POLE INSTALLATION BOLTS (2 EACH, BRASS 1/4"-20 x 1 1/2"), FLATWASHERS, AND SIGN SCREWS SHALL BE FURNISHED WITH UNIT AND STORED INSIDE ADA COVER.
7. PUSH BUTTON COVER SHALL BE RAIN AND DUST PROOF.
8. PAINT SHALL BE AS SHOWN ON M-90.1.
9. SEE M-99.1 FOR PUSH BUTTON STATION SIGNS.
10. "ADA" BUTTON AND COVER SHALL BE A ONE PIECE MOLDED ASSEMBLY.
11. CONTROL BUTTON SHALL BE A MINIMUM OF 2 INCHES AT ITS SMALLEST DIMENSION.
12. CONTROL BUTTON PLUNGER AND COMPONENTS SHALL BE MADE OF STAINLESS STEEL.
13. THE FORCE REQUIRED TO OPERATE THE BUTTON SHALL BE 5 lbf (22.2N) OR LESS.

ADA PUSH BUTTON

DETAIL NO.
M-95.4

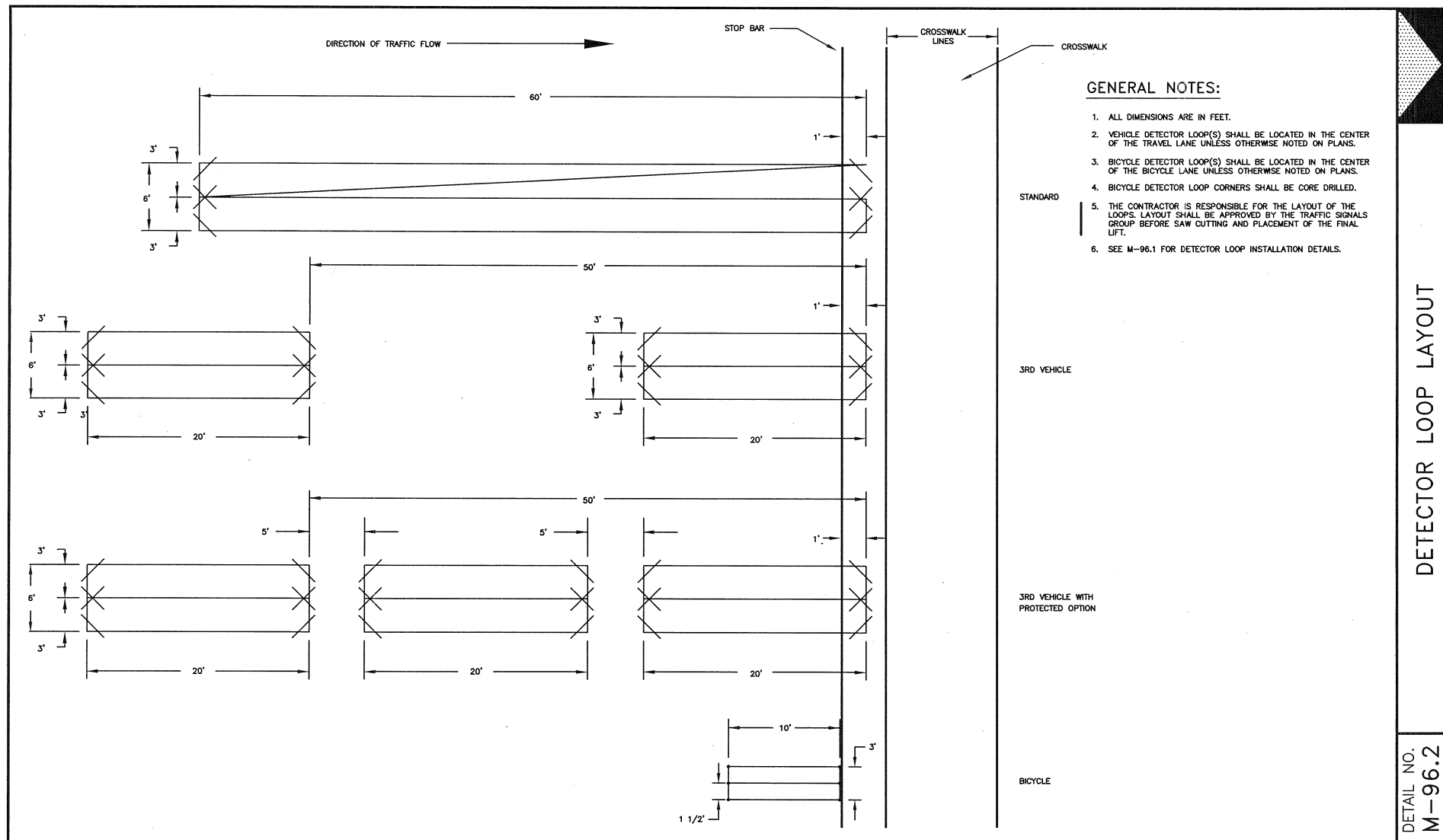


GENERAL NOTES:

- ALL DIMENSIONS ARE IN INCHES.
- ALL DETECTOR LOOPS SHALL BE INSTALLED AS SHOWN ON THE PROJECT PLANS, CITY OF MESA STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER.
- ANY DETECTOR LOOP THAT DOES NOT MEET THE ADOT FIELD TEST REQUIREMENT (ADOT 735-3.01 (E)), OR CANNOT BE TUNED TO THE ENGINEER'S SATISFACTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY.
- ON ALL PROJECTS WHERE NEW PAVEMENT IS TO BE INSTALLED, THE DETECTOR LOOPS SHALL BE INSTALLED IN THE BASE COURSE.
- ALL SAW CUTS REQUIRE 1 1/2" COVER MINIMUM.
- CITY OF MESA WILL ACCEPT EITHER CORE DRILL OR 45 DEGREE SAW CUT CORNERS.
- BLOW OUT ALL SAW CUTS BEFORE INSTALLING THE LOOP WIRE. AFTER BLOWING OUT SAW CUTS, CLEAN SILT FROM ROADWAY SURFACE SO THAT NO LAYER OF DEBRIS EXISTS AND ALL PAINTED LANE LINES ARE CLEARLY VISIBLE.
- ALL DETECTOR LOOPS SHALL BE GIVEN A CONTINUITY AND INSULATION TEST BY THE CONTRACTOR BEFORE AND AFTER PLACING THE FINAL PAVING OR PLACING THE SEALER IN THE SAW CUTS.
- LOOP WIRE USED IN THE ROADWAY DETECTION SHALL BE IMSA SPECIFICATION #51-5-1984. THE ENCASED TUBE COLOR SHALL BE ORANGE. SEE M-90.1.
- NUMBER OF LOOP TURNS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
- ASPHALT SAWCUTS SHALL BE SEALED (FILLED) WITH W.R. MEADOWS LOOP SEALANT, 3M LOOP SEALANT, OR HOT APPLIED RUBBERIZED SEALANT, TO 1/8" BELOW PAVEMENT SURFACE.
- CONCRETE SAWCUTS SHALL BE SEALED (FILLED) WITH 3M LOOP SEALANT, TO 1/8" BELOW CONCRETE SURFACE.
- ALL LEAD-IN CABLE IS TO BE PLACED IN CONDUIT (LOOP STUB OUTS) TO CROSS UNDER CURB AND GUTTER TO PULL BOX. CONDUIT IS TO BE 2" SCHEDULE 40 PVC.
- ALL LOOP WIRE SHALL BE TWISTED AT THE RATE OF TWO TURNS PER FOOT FROM THE CORNER OF THE LOOP INTO THE PULL BOX.
- LOOP STUB OUT HOLE AT GUTTER LIP IS TO BE FILLED AS SHOWN ON DETAIL M-96.3.
- THE LEADING WIRE FOR EACH LOOP SHALL BE TAGGED WITH WHITE TAPE TO DIFFERENTIATE BETWEEN THE LEADING AND LAGGING END OF THE WIRE.
- WHEN HOOKING UP MULTIPLE LOOPS TO THE SAME PHASE, THE LEADING WIRE FROM ONE LOOP SHALL BE CONNECTED TO THE NEXT LANE'S LAGGING WIRE.
- WHEN MORE THAN ONE LOOP IS INSTALLED IN THE SAME DIRECTION, LEAD IN WIRES SHALL BE IDENTIFIED IN THE PULL BOX AS FOLLOWS: CURB TO MEDIAN; FRONT TO BACK.
 - 1 BLACK TAPE = CURB LANE
 - 2 BLACK TAPES = MIDDLE LANE(S)
 - 3 BLACK TAPES = LEFT THRU LANE
 - 4 BLACK TAPES = FRONT 6' x 20' LOOP
 - 5 BLACK TAPES = MIDDLE 6' x 20' LOOP
 - 6 BLACK TAPES = BACK 6' x 20' LOOP
- DETAIL 1 SHOWS INSTALLATION IN EXISTING PAVEMENT AND DETAIL 2 SHOWS INSTALLATION IN BASE COURSE.
- WITHIN 3 DAYS OF COMPLETION OF DETECTOR LOOP INSTALLATION, THE CONTRACTOR SHALL SCHEDULE FINAL FIELD TEST WITH THE TRAFFIC SIGNAL INSPECTOR. UPON PASSING FINAL FIELD TEST, DETECTOR LOOPS SHALL BE CONNECTED AND MADE TO OPERATE BY THE CONTRACTOR.

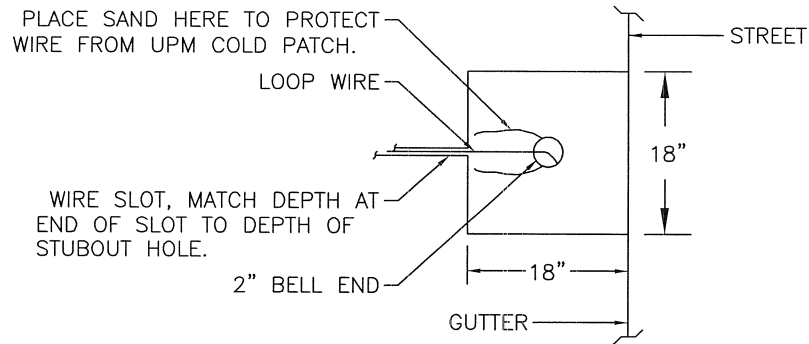
DETECTOR LOOP INSTALLATION DETAILS

DETAIL NO.
M-96.1

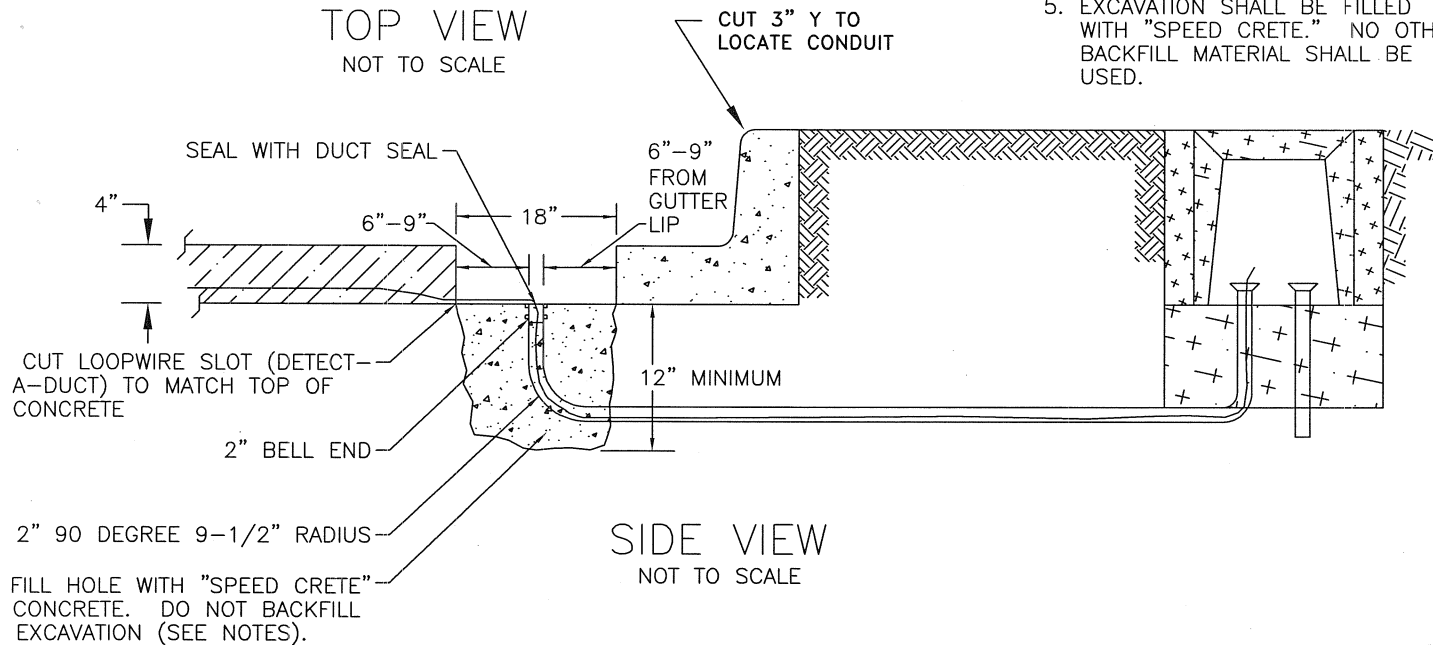


DETECTOR LOOP LAYOUT

DETAIL NO.
M-96.2



TOP VIEW
NOT TO SCALE



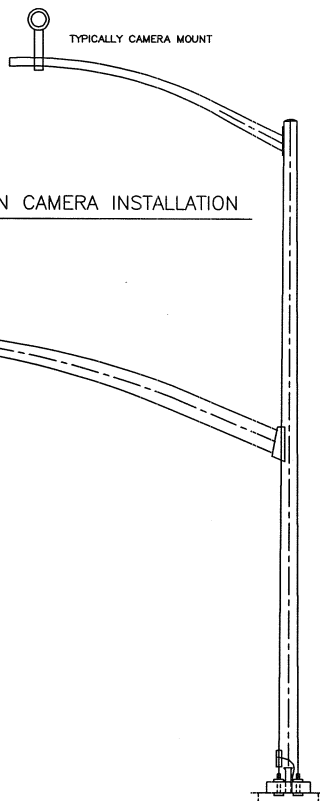
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. CONDUIT END SHALL BE SEALED WITH DUCT SEAL.
3. COVER EXPOSED WIRE WITH JUST ENOUGH SAND TO PROTECT FROM UPM COLD PATCH.
4. UPM COLD PATCH SHALL BE COMPACTED IN TWO LIFTS WITH A MACHINE PLATE TAMPER. LEAVE UPM 1/4" ABOVE OF ROADWAY SURFACE.
5. EXCAVATION SHALL BE FILLED WITH "SPEED CRETE." NO OTHER BACKFILL MATERIAL SHALL BE USED.

DETECTOR LOOP STUBOUT

DETAIL NO.
M-96.3

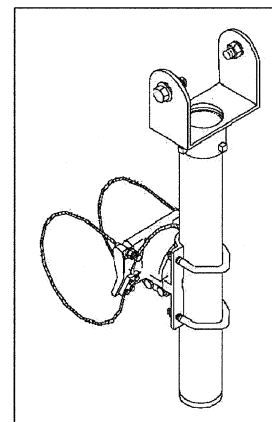
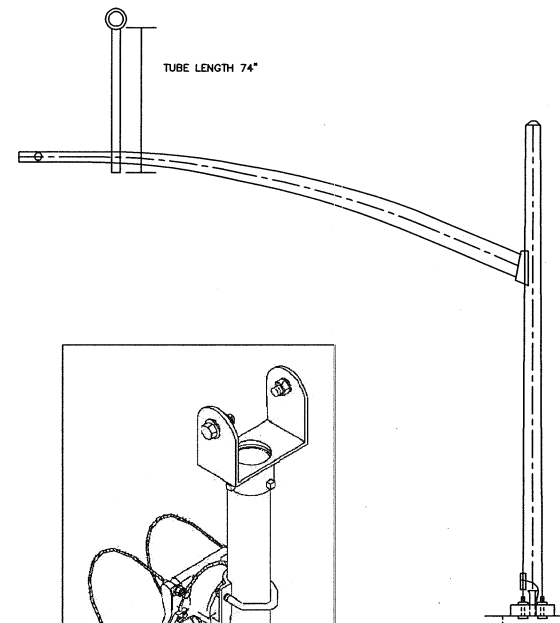
TYPICAL VIDEO DETECTION CAMERA INSTALLATION



GENERAL NOTES:

1. VIDEO DETECTION SYSTEM CABLE (M97.0- 6.A) SHALL BE ATTACHED TO THE STRAIN RELIEF SUPPORT HOOK LOCATED AT THE TOP OF THE POLE (INSIDE). CABLE SHALL BE SUPPORTED WITH FACTORY CABLE STRAIN RELIEF DEVICE.
2. VDS-CABLE SHALL BE OF 1-PIECE AND SUFFICIENT LENGTH TO EXTEND FROM THE BASE OF THE POLE WITH MIN 6' LENGTH AT HAND HOLE. A DRIP LOOP SHALL BE FORMED AT THE BASE OF THE CAMERA INSTALLATION.
3. VDS-CABLE SHALL BE SPLICED (ALL SPLICES SHALL BE TWISTED, SOLDERED AND INSULATED W/ADHESIVE LINED HEAT SHRINK TUBE) IN THE HAND HOLE TO THE VDS-BRANCH CABLE. VDS-BRANCH CABLE SHALL BE UNSPLICED FROM POLE HAND HOLES TO THE CONTROLLER CABINET. LEAVE 6' AT EACH END OF THE VDS-BRANCH CABLE.

NON - TYPICAL VIDEO DETECTION CAMERA INSTALLATION



CAMERA MOUNTING HARDWARE FOR NON-TYPICAL INSTALLATION ONLY

PELCO CAMERA MOUNT, AB-0175-5-62

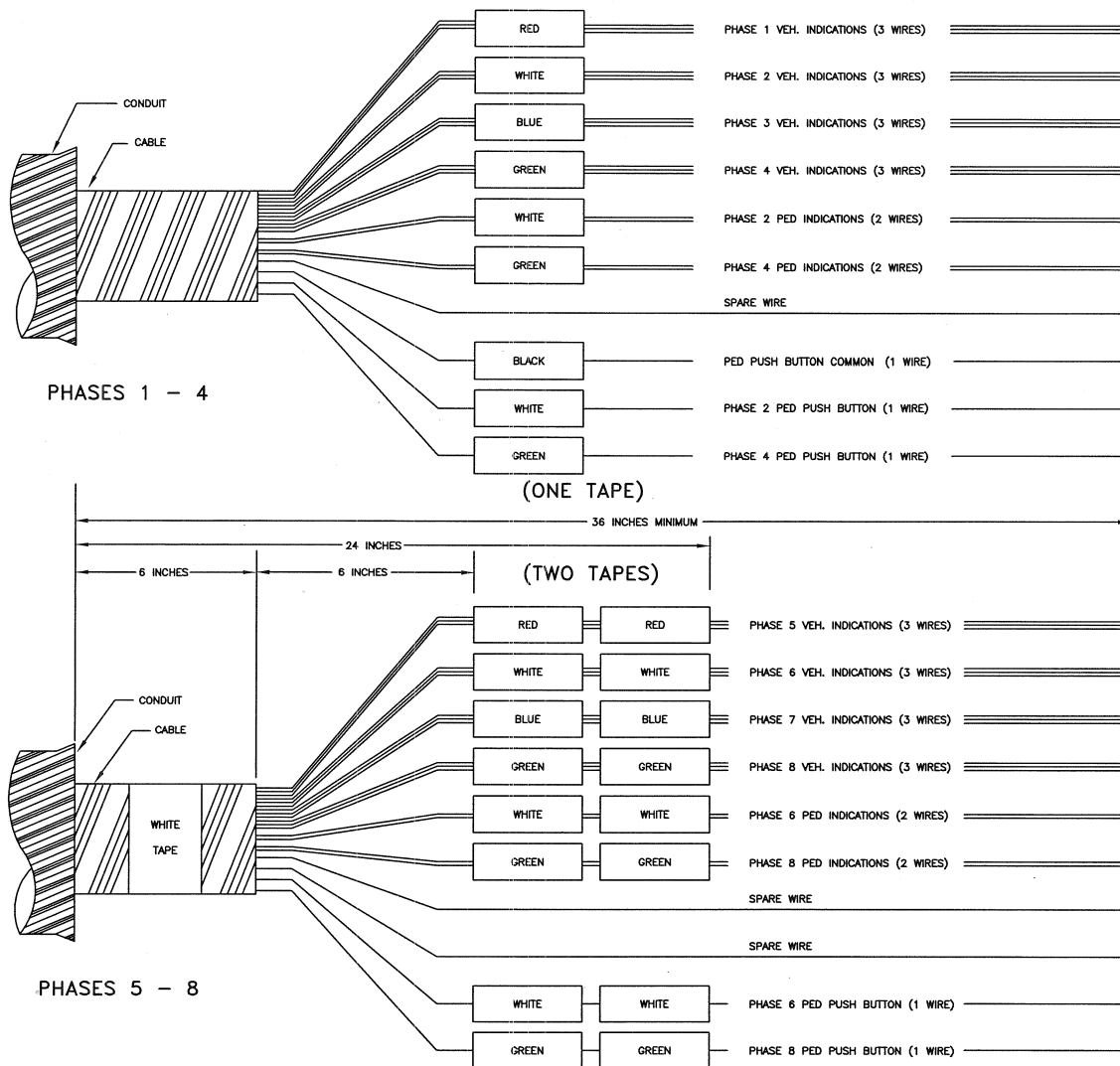
VIDEO DETECTION CAMERA INSTALLATION

DETAIL NO.
M-96.4

CABLE FOR TRAFFIC SIGNALS

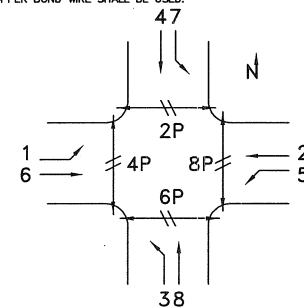
1. IMSA CABLE:
APPROVED SUPPLIER: BELDEN, ROME
PART NUMBER: IMSA 19-1, 1984
DESCRIPTION: 14 AWG/ 2, 5, 7 AND 20 CONDUCTOR SHALL HAVE A RIPCORD
CONDUCTOR: 14 AWG SOLID COPPER WIRE
NOTE- REFER TO M-97.1, M-97.2, M-97.3 AND M-97.4 FOR PROPER PHASE CODING.
2. DETECTOR LOOP WIRE:
PART NUMBER: IMSA #51-5-1984
DESCRIPTION: POLYVINYL CHLORIDE INSULATED, NYLON JACKETED LOOP DETECTOR WIRE LOOSELY ENCASED IN A POLYVINYL CHLORIDE OR A POLYETHYLENE TUBE.
ENCASING TUBE COLOR: ORANGE
3. DETECTOR LOOP LEAD-IN WIRE:
APPROVED SUPPLIER: 3M (CANOGA), OR TW COMCORP
PART NUMBER: CANOGA 30003 OR TW COMCORP TSL1804-MAG
DESCRIPTION: 18 AWG 4 CONDUCTOR SHIELDED
CONDUCTOR: 18 AWG STRANDED TINNED COPPER
SHIELD: ALUMINUM/POLYESTER
BLOCK MATERIAL: CABLE IS FILLED WITH GEL WATER BLOCKING MATERIAL
JACKET MATERIAL: POLYETHYLENE
4. TELECOMMUNICATIONS CABLE:
APPROVED SUPPLIER: ACCU - TECH CORP.
PART NUMBER: S2626
DESCRIPTION: 22 AWG 8 CONDUCTOR WITH OVER ALL SHIELD
CONDUCTOR: 22 AWG STRANDED COPPER
SHIELD: TINNED COPPER BRAID 87% COVERAGE
DRAIN WIRE: 22 AWG STRANDED COPPER
INSULATION: .032 INCH POLYETHYLENE
SEPARATOR: .0005 INCH CLEAR MYLAR WRAP
ELECTRICAL: 600 VOLT
CAPACITANCE: 25 PF/FT BETWEEN CONDUCTORS
45 PF/FT BETWEEN ONE CONDUCTOR AND CONDUCTOR CONNECTED TO SHIELD.
5. FIRE PREEMPTION CABLE:
APPROVED SUPPLIER: 3M OR ACCU - TECH CORP.
PART NUMBER: 3M/ M-138 OR ACCU - TECH/ S2138
DESCRIPTION: AWG #20 STRANDED 3 CONDUCTOR WITH DRAIN WIRE
CONDUCTOR: AWG #20 (7 X 28) STRANDED INDIVIDUALLY TINNED COPPER
SHIELD: ALUMINUM/POLYESTER
DRAIN WIRE: AWG #20 (7 X 28) STRANDED INDIVIDUALLY TINNED COPPER

6. A. VIDEO DETECTION SYSTEM CABLE:
APPROVED SUPPLIER: ECONOLITE
PART NUMBER: ASOLOCBL80
DESCRIPTION: AUTOSCOPE CAMERA CABLE (FROM CAMERA TO BASE OF POLE)
CONDUCTOR: 11 CONDUCTOR, 16 - 18 AWG
SHIELD: ALUMINUM/POLYESTOR W/18AWG DRAIN WIRE
JACKET MATERIAL: SANTOPRENE 121-87
 - B. VIDEO DETECTION SYSTEM CABLE:
APPROVED SUPPLIER: ECONOLITE, BELDAM OR CAROL/GENERAL CABLE
PART NUMBER: ECPI #1175-003, BELDAM #8891, C/GC #C8106
DESCRIPTION: AUTOSCOPE BRANCH CABLE (CABLE IN MAIN RUNS TO CABINET)
CONDUCTOR: 11 CONDUCTOR, 16 - 18 AWG
SHIELD: ALUMINUM/POLYESTOR W/18AWG DRAIN WIRE
JACKET MATERIAL: LOW DENSITY POLYETHYLENE
 7. A. FIBER OPTIC CABLE: UNDERGROUND/ CONDUIT USE
APPROVED SUPPLIER: OFS
PART NUMBER: AT-3BE12TT-012 *
AT-3BE12TT-024 *
AT-3BE12TT-036 *
AT-3BE12TT-098 *
AT-3BE12YT-144 *
FIBER DESCRIPTION: (OSP) OUTSIDE PLANT CABLE NON-ARMORED DIELECTRIC LOOSE TUBE GEL FILLED CABLE 0.40/0.30 DB/KM @ 1310/1550 NM
FIBER: 12, 24, 36, 96 OR 144 SINGLE-MODE STRANDS SEE APPROVED PLANS FOR FIBER COUNT
JACKET: DCM, 1PE DRYBLOCK CORE
 - B. FIBER OPTIC CABLE: AERIAL USE ONLY
APPROVED SUPPLIER: OFS
PART NUMBER: AT-34M27DT-036-CLCB
FIBER DESCRIPTION: (OSP) OUTSIDE PLANT CABLE ADSS ALL DIELECTRIC SELF SUPPORT LOOSE TUBE GEL FILLED CABLE 0.40/0.30 DB/KM @ 1310/1550 NM
FIBER: 36 SINGLE-MODE STRANDS SEE APPROVED PLANS FOR FIBER COUNT
JACKET: DCM, 2PE OD: 0.519 IN (13.2 MM) DRYBLOCK CORE
- SUPPLIERS AND/OR PART NUMBERS OTHER THAN THOSE NOTED ABOVE MUST BE APPROVED BY THE CITY OF MESA TRAFFIC SIGNAL, ITS ANALYST, PRIOR TO INSTALLATION.
- * PART NUMBERS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION BY THE MANUFACTURER. AS NOTED ABOVE PART NUMBERS MUST BE APPROVED BY THE CITY OF MESA TRAFFIC SIGNAL, ITS ANALYST, PRIOR TO INSTALLATION



GENERAL NOTES:

1. IN CIRCUITS WHERE THE VOLTAGE DOES NOT EXCEED 600 VOLTS AC, SPLICES SHALL BE MADE UTILIZING APPROVED WING NUT WIRE CONNECTORS. SOLDERED CONNECTIONS SHALL NOT BE PERMITTED EXCEPT FOR ROADWAY DETECTOR LOOP WIRE TO DETECTOR LOOP LEAD-IN WIRE. THE INSULATION FOR THE SPLICE SHALL CONSIST OF FOUR (4) LAYERS OF BLACK VINYL ELECTRICAL TAPE AND COMPLETE SUBMERSION IN "SCOTCH KOTE".
2. ALL ELECTRIC SERVICE SPLICES IN PULL BOXES SHALL BE MADE USING A HOMAC "FLOOD SEAL" RUBBERIZED ALUMINUM BAR SPLICE KIT PART #RAB4C OR APPROVED EQUAL.
3. IMSA CABLE FOR EACH MAST ARM MOUNTED SIGNAL HEAD SHALL BE CONTINUOUS WITHOUT SPLICING FROM THE TERMINAL BLOCKS IN THE MAST ARM HEAD TO THE PULL BOX AT THE BASE OF THE POLE.
4. ALL CONDUCTORS IN PULL BOXES AND CONTROLLER CABINETS SHALL BE TAGGED TO IDENTIFY THEIR PHASE NUMBER WITH COLOR CODED MARKING TAPE AS PER CITY OF MESA PHASING CODES (DRAWINGS M-97.1, M-97.2, AND M-97.3). EACH TAPE SHALL BE WRAPPED AROUND THE APPROPRIATE CONDUCTORS FOUR (4) TIMES (FOR VEHICLE INDICATION, PED INDICATION, AND PED PUSH BUTTON STATION WIRING TYPES AND COLOR CODES (FROM PULLBOX TO POLE) REFER TO ADOT STANDARD SPECIFICATION "CONDUCTOR TABLE" ADOT 732-2.01(A)).
5. STREETLIGHT CIRCUITS SHALL BE TAPED TOGETHER TO KEEP THEM SEPARATE FROM THE TRAFFIC SIGNAL CIRCUITS.
6. ALL SPARES IN THE IMSA CABLE SHALL BE TAPED INDIVIDUALLY WITH BLACK VINYL ELECTRICAL TAPE, SKOTCH COATED AND COILED UP IN THE BOTTOM OF THE PULL BOX.
7. EACH SIGNAL MAST ARM PLUMBIZER SHALL HAVE A MINIMUM OF EIGHTEEN (18) INCHES OF WIRE EXTENDING OUT TO ALLOW FOR CONNECTING IN THE SIGNAL HEAD.
8. ALL END TENONS ON MAST ARMS SHALL BE WIRED FOR PROTECTED/PERMITTED OPERATION. ALL UNUSED TENONS SHALL BE WIRED FOR FUTURE USE AND CAPPED AFTER THE WIRES ARE SECURED IN THE TENON BY THE SAFETY BOLT.
9. ALL MAST ARM HEAD WIRING SHALL BE TAGGED IN THE PULL BOX AS FOLLOWS:
OUTSIDE HEAD = 1 YELLOW TAPE
MIDDLE HEAD = 2 YELLOW TAPES
INSIDE HEAD = 3 YELLOW TAPES
10. STREETLIGHT LUMINAIRES ON SIGNAL POLES SHALL BE WIRED PER CITY OF MESA STANDARD DETAILS.
11. STREETLIGHT CIRCUIT WIRING SHALL BE #10 AWG, XHHW STRANDED BLACK IN MAIN CONDUIT RUNS, WITH THE NEUTRAL IDENTIFIED WITH WHITE MARKING TAPE ON THE ENDS.
12. IN ALL TRAFFIC SIGNAL CONDUITS A GREEN #8 THHN/THWN STRANDED COPPER BOND WIRE SHALL BE USED.



STANDARD 8 PHASE LAYOUT
SEE PLANS FOR CORRECT PHASING SEQUENCE

2 PHASE INTERSECTION

STANDARD IMSA CABLE, 20 CONDUCTOR
CABLE #1, NO TAPE
CONDUCTORS WITHIN CABLE PHASE CODING

VEHICULAR INDICATIONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
SPARE	RED	RED, ORANGE, GREEN
1	WHITE	RED W/BLACK, ORANGE W/BLACK, GREEN W/BLACK
SPARE	BLUE	RED W/WHITE, BLUE W/WHITE, GREEN W/WHITE
2	GREEN	RED W/GREEN, ORANGE W/RED, BLUE W/RED

PEDESTRIAN INDICATIONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
1	WHITE	BLUE, BLACK
2	GREEN	BLUE W/BLACK, BLACK W/WHITE

PEDESTRIAN PUSH BUTTONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
1	WHITE	WHITE W/RED
2	GREEN	BLACK W/RED
SPARE		SOLID WHITE
PPB COMMON	BLACK	WHITE W/BLACK

GENERAL NOTES:

- IN CIRCUITS WHERE THE VOLTAGE DOES NOT EXCEED 600 VOLTS AC, THE SPLICES SHALL BE MADE UTILIZING APPROVED WING NUT WIRE CONNECTORS. SOLDERED CONNECTIONS SHALL NOT BE PERMITTED EXCEPT FOR ROADWAY DETECTOR LOOP WIRE TO DETECTOR LOOP LEAD-IN WIRE. THE INSULATION FOR THE SPLICE SHALL CONSIST OF FOUR (4) LAYERS OF BLACK VINYL ELECTRICAL TAPE AND COMPLETE SUBMERSION IN "SCOTCH KOTE".
- ALL ELECTRIC SERVICE SPLICES IN PULL BOXES SHALL BE MADE USING A HOMAC "FLOOD SEAL" RUBBERIZED ALUMINUM BAR SPLICE KIT PART #RAB4C OR AN APPROVED EQUAL.
- IMSA CABLE FOR EACH MAST ARM MOUNTED SIGNAL HEAD SHALL BE CONTINUOUS WITHOUT SPLICING FROM THE TERMINAL BLOCKS IN THE MAST ARM HEAD TO THE PULL BOX AT THE BASE OF THE POLE.
- ALL CONDUCTORS IN PULL BOXES AND CONTROLLER CABINETS SHALL BE TAGGED TO IDENTIFY THEIR PHASE NUMBER WITH COLOR CODED MARKING TAPE AS PER CITY OF MESA PHASING CODES (DRAWINGS M-97.1, M-97.2, AND M-97.3). EACH TAPE SHALL BE WRAPPED AROUND THE APPROPRIATE CONDUCTORS FOUR (4) TIMES (FOR VEHICLE INDICATION, PED INDICATION, AND PED PUSH BUTTON STATION WIRING TYPES AND COLOR CODES (FROM PULLBOX TO POLE) REFER TO ADOT STANDARD SPECIFICATION "CONDUCTOR TABLE" ADOT 732-2.01(A)).
- STREETLIGHT CIRCUITS SHALL BE TAPED TOGETHER TO KEEP THEM SEPARATE FROM THE TRAFFIC SIGNAL CIRCUITS.
- ALL SPARES IN THE IMSA CABLE SHALL BE TAPED INDIVIDUALLY WITH BLACK VINYL ELECTRICAL TAPE, SKOTCH COATED AND COILED UP IN THE BOTTOM OF THE PULL BOX.
- EACH SIGNAL MAST ARM PLUMBIZER SHALL HAVE A MINIMUM OF EIGHTEEN (18) INCHES OF WIRE EXTENDING OUT TO ALLOW FOR CONNECTING IN THE SIGNAL HEAD.
- ALL END TENONS ON MAST ARMS SHALL BE WIRED FOR PROTECTED/PERMITTED OPERATION. ALL UNUSED TENONS SHALL BE WIRED FOR FUTURE USE AND CAPPED AFTER THE WIRES ARE SECURED IN THE TENON BY THE SAFETY BOLT.
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MIDDLE HEAD = 2 YELLOW TAPES
INSIDE HEAD = 3 YELLOW TAPES
- STREETLIGHT LUMINAIRES ON SIGNAL POLES SHALL BE WIRED PER CITY OF MESA STANDARD DETAILS.
- STREETLIGHT CIRCUIT WIRING SHALL BE #10 AWG, XHHW STRANDED BLACK IN MAIN CONDUIT RUNS, WITH THE NEUTRAL IDENTIFIED WITH WHITE MARKING TAPE ON THE ENDS.
- IN ALL TRAFFIC SIGNAL CONDUITS A GREEN #8 THHW/THWN STRANDED COPPER BOND WIRE SHALL BE USED.

IMSA 20 CONDUCTOR CABLE 2 PHASE OPERATION

DETAIL NO.
M-97.2

8 PHASE INTERSECTION

STANDARD IMSA CABLE, 20 CONDUCTOR
CABLE #1, NO TAPE
CONDUCTORS WITHIN CABLE PHASE CODING

STANDARD IMSA CABLE, 20 CONDUCTOR
CABLE #2, 1 WHITE TAPE WRAP
CONDUCTORS WITHIN CABLE PHASE CODING

VEHICULAR INDICATIONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
1	RED	RED, ORANGE, GREEN
2	WHITE	RED W/BLACK, ORANGE W/BLACK, GREEN W/BLACK
3	BLUE	RED W/WHITE, BLUE W/WHITE, GREEN W/WHITE
4	GREEN	RED W/GREEN, ORANGE W/RED, BLUE W/RED

PEDESTRIAN INDICATIONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
2	WHITE	BLUE, BLACK
4	GREEN	BLUE W/BLACK, BLACK W/WHITE

PEDESTRIAN PUSH BUTTONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
2	WHITE	WHITE W/RED
4	GREEN	BLACK W/RED
SPARE		SOLID WHITE
PPB COMMON	BLACK	WHITE W/BLACK

MARKING TAPE PER PHASES

#1 = 1 RED TAPE

#2 = 1 WHITE TAPE

#3 = 1 BLUE TAPE

#4 = 1 GREEN TAPE

VEHICULAR INDICATIONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
5	RED	RED, ORANGE, GREEN
6	WHITE	RED W/BLACK, ORANGE W/BLACK, GREEN W/BLACK
7	BLUE	RED W/WHITE, BLUE W/WHITE, GREEN W/WHITE
8	GREEN	RED W/GREEN, ORANGE W/RED, BLUE W/RED

PEDESTRIAN INDICATIONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
6	WHITE	BLUE, BLACK
8	GREEN	BLUE W/BLACK, BLACK W/WHITE

PEDESTRIAN PUSH BUTTONS

PHASE	TAPE ID COLORS	INTERVAL WIRE COLORS
6	WHITE	WHITE W/RED
8	GREEN	BLACK W/RED
SPARE		SOLID WHITE
SPARE		WHITE W/BLACK

MARKING TAPE PER PHASES

#5 = 2 RED TAPES

#6 = 2 WHITE TAPES

#7 = 2 BLUE TAPES

#8 = 2 GREEN TAPES

GENERAL NOTES:

- IN CIRCUITS WHERE THE VOLTAGE DOES NOT EXCEED 600 VOLTS AC, THE SPLICES SHALL BE MADE UTILIZING APPROVED WING NUT WIRE CONNECTORS. SOLDERED CONNECTIONS SHALL NOT BE PERMITTED EXCEPT FOR ROADWAY DETECTOR LOOP WIRE TO DETECTOR LOOP LEAD-IN WIRE. THE INSULATION FOR THE SPlice SHALL CONSIST OF FOUR (4) LAYERS OF BLACK VINYL ELECTRICAL TAPE AND COMPLETE SUBMERSION IN "SCOTCH KOTE".
- ALL ELECTRIC SERVICE SPLICES IN PULL BOXES SHALL BE MADE USING A HOMAC "FLOOD SEAL" RUBBERIZED ALUMINUM BAR SPlice KIT PART #RAB4C OR AN APPROVED EQUAL.
- IMSA CABLE FOR EACH MAST ARM MOUNTED SIGNAL HEAD SHALL BE CONTINUOUS WITHOUT SPlicing FROM THE TERMINAL BLOCKS IN THE MAST ARM HEAD TO THE PULL BOX AT THE BASE OF THE POLE.
- ALL CONDUCTORS IN PULL BOXES AND CONTROLLER CABINETS SHALL BE TAGGED TO IDENTIFY THEIR PHASE NUMBER WITH COLOR CODED MARKING TAPE AS PER CITY OF MESA PHASING CODES (DRAWINGS M-97.1, M-97.2, AND M-97.3). EACH TAPE SHALL BE WRAPPED AROUND THE APPROPRIATE CONDUCTORS FOUR (4) TIMES (FOR VEHICLE INDICATION, PED INDICATION, AND PED PUSH BUTTON STATION WIRING TYPES AND COLOR CODES (FROM PULLBOX TO POLE) REFER TO ADOT STANDARD SPECIFICATION "CONDUCTOR TABLE" ADOT 732-2.01(A)).
- STREETLIGHT CIRCUITS SHALL BE TAPED TOGETHER TO KEEP THEM SEPARATE FROM THE TRAFFIC SIGNAL CIRCUITS.
- ALL SPARES IN THE IMSA CABLE SHALL BE TAPED INDIVIDUALLY WITH BLACK VINYL ELECTRICAL TAPE, SKOTCH COATED AND COILED UP IN THE BOTTOM OF THE PULL BOX.
- EACH SIGNAL MAST ARM PLUMBIZER SHALL HAVE A MINIMUM OF EIGHTEEN (18) INCHES OF WIRE EXTENDING OUT TO ALLOW FOR CONNECTING IN THE SIGNAL HEAD.
- ALL END TENONS ON MAST ARMS SHALL BE WIRED FOR PROTECTED/PERMITTED OPERATION. ALL UNUSED TENONS SHALL BE WIRED FOR FUTURE USE AND CAPPED AFTER THE WIRES ARE SECURED IN THE TENON BY THE SAFETY BOLT.
- ALL MAST ARM HEAD WIRING SHALL BE TAGGED IN THE PULL BOX AS FOLLOWS:
OUTSIDE HEAD = 1 YELLOW TAPE
MIDDLE HEAD = 2 YELLOW TAPES
INSIDE HEAD = 3 YELLOW TAPES
- STREETLIGHT LUMINAIRES ON SIGNAL POLES SHALL BE WIRED PER CITY OF MESA STANDARD DETAILS.
- STREETLIGHT CIRCUIT WIRING SHALL BE #10 AWG, XHHW STRANDED BLACK IN MAIN CONDUIT RUNS, WITH THE NEUTRAL IDENTIFIED WITH WHITE MARKING TAPE ON THE ENDS.
- IN ALL TRAFFIC SIGNAL CONDUITS A GREEN #8 THHW/THWN STRANDED COPPER BOND WIRE SHALL BE USED.

IMSA 20 CONDUCTOR CABLE 8 PHASE OPERATION

DETAIL NO.
M-97.3

IMSA CABLE 19-1, 1984 #14 AWG, 7 CONDUCTOR, 5 CONDUCTOR, AND 2 CONDUCTOR

OUTBOARD MAST ARM & TYPE "Q" HEADS

7 CONDUCTOR CABLE	
BASIC COLOR	SIGNAL INTERVAL
RED	RED
ORANGE	YELLOW
GREEN	GREEN
BLACK	YELLOW ARROW
BLUE	GREEN ARROW
WHITE	VEHICLE COMMON
WHITE/BLACK	SPARE

TYPE "F" SIGNAL HEADS INBOARD & SIDEMOUNT

5 CONDUCTOR CABLE	
BASIC COLOR	SIGNAL INTERVAL
RED	RED
ORANGE	YELLOW
GREEN	GREEN
WHITE	VEHICLE COMMON
BLACK	SPARE

PEDESTRIAN HEADS

5 CONDUCTOR CABLE	
BASIC COLOR	SIGNAL INTERVAL
RED	DON'T WALK
GREEN	WALK
WHITE	PEDESTRIAN COMMON
BLACK	SPARE
ORANGE	SPARE

PUSH BUTTON

2 CONDUCTOR CABLE	
BASIC COLOR	PUSH BUTTON STATION
BLACK	PUSH BUTTON
WHITE	PUSH BUTTON COMMON

DOUBLE PEDESTRIAN HEADS

7 CONDUCTOR CABLE		
BASIC COLOR	SIGNAL INTERVAL	PED PHASING
RED	DON'T WALK	4 & 8
ORANGE	SPARE	
GREEN	WALK	4 & 8
BLACK	DON'T WALK	2 & 6
BLUE	WALK	2 & 6
WHITE	COMMON	PED COMMON
WHITE/BLACK	SPARE	

ALL CABLES SHALL BE TAGGED AS TO THEIR ASSIGNED PHASE IN THE PULL BOX.

GENERAL NOTES:

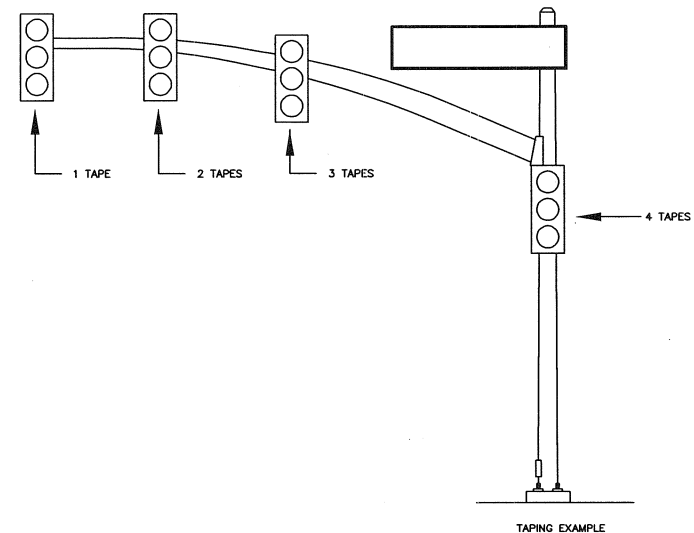
- ALL IMSA CABLE SHALL BE 19-1, 1984 #14 AWG.
- ALL IMSA CABLE IS PULLED CONTINUOUS (NO SPLICING) FROM THE TERMINAL COMPARTMENT IN EACH SIGNAL HEAD, PED HEAD, OR PUSH BUTTON STATION TO THE PULL BOX AT THE BASE OF THE POLE.
- CABLE SHALL BE UTILIZED AS FOLLOWS:
 - 2 CONDUCTOR = ALL PUSH BUTTON STATIONS
 - 5 CONDUCTOR = ALL 3-SECTION SIGNAL HEADS AND PED HEADS (1 EACH)
 - 7 CONDUCTOR = ALL OUTBOARD MAST ARM AND TYPE "Q" SIGNAL HEADS
 - 7 CONDUCTOR = ALL DOUBLE PEDESTRIAN HEADS
- IMSA CABLE FOR EACH MAST ARM MOUNTED SIGNAL HEAD SHALL BE CONTINUOUS WITHOUT SPLICING FROM THE TERMINAL BLOCKS IN THE MAST ARM HEAD TO THE PULL BOX AT THE BASE OF THE POLE.
- YELLOW ID TAPE SHALL BE APPLIED 6" ABOVE PVC END BELLS ON IMSA CABLE JACKET.

- ALL CABLE SHALL BE TAGGED IN THE PULL BOX WITH YELLOW TAPE AS FOLLOWS:

MAST ARM VEHICLE INDICATIONS		
HEAD	CONDUCTORS	TAPE(S)
OUTSIDE	7	1
NEXT INSIDE	5	2
NEXT INSIDE	5	3
NEXT INSIDE	5	4
NEXT INSIDE...	5	5...
ETC.	5	ETC...

POLE MOUNT VEHICLE INDICATIONS		
HEAD	TAPE(S)	
SAME PHASE AS MAST ARM HEADS	NEXT #	
DIFFERENT PHASE FROM MAST ARM	NONE	

- IMSA CABLES FOR PEDESTRIAN HEADS SHALL BE IDENTIFIED IN PULL BOXES USING BROWN TAPE IN ADDITION TO STANDARD PHASE ID TAPING.



IMSA CABLE CONDUCTORS IN TRAFFIC SIGNAL POLES

DETAIL NO.
M-97.4

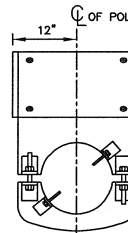
NOTES:

1. SEE M-98.2 FOR SIGN FACE LAYOUT, WIRING, AND INSTALLATION.
2. TWO BRACKET SETS PER SIGN REQUIRED. ONE OF EACH DIAMETER SHOWN ON THE BRACKET DETAIL.
3. THIS DRAWING SHALL BE USED TO CALCULATE THE LOAD ON SIGNAL POLES TO ASSURE THAT THEY CAN WITHSTAND 80 MPH WINDS PER AASHTO SPECIFICATIONS. SEE DRAWINGS M-94.2, M-94.3, M-94.4, M-94.5, AND M-94.6 FOR POLE DETAILS.
4. SIGN WEIGHT IS APPROXIMATELY 300 POUNDS.

CABINET DIMENSION INFORMATION

	"A"	"B"	"C"	"D"
6" CABINET	6' - 0"	4' - 6"	18"	30"
8" CABINET	8' - 0"	6' - 4"	20"	30"
10" CABINET	10' - 0"	8' - 0"	24"	30"

CABINET SECTION



TOP

BACK

FRONT

STEEL ANGLE 1 1/2" X 1 1/2" X 1/8"
CUT TO FIT OVER THE EXTRUSION'S
RACEWAY WITH TWO 7/16" HOLES
TO RECEIVE THE BRACING RODS
AND WELD THE RODS IN PLACE.

12 CW-HO LAMPS
3 PER SIGN EQUALLY
SPACED IN CABINET.

ALUMINUM ANGLE 1" X 1" X 3"
LONG WITH HOLE TO ACCEPT
PROP ROD WHEN SIGN FACE
IS OPENED.

STEEL PROP ROD, 1/4" DIAMETER
32" LONG, 1 AT EACH END OF
SIGN FACES (4 TOTAL PER SIGN).

COTTER PIN TO RETAIN PROP ROD.

ALUMINUM ANGLE 1" X 1" X 3"
LONG WITH HOLE TO RECEIVE
PROP ROD.

5/16" TRUSS HEAD BOLTS (PLATED)
TO SECURE THE 2" X 2" X 3/16"
STEEL ANGLE TO THE EXTRUSION.
3 BOLTS PER ANGLE "C" FLUSH FACE.

MOUNTING BRACKET

3/8" STEEL PLATE, ELECTROPLATED.

1/4" THICK TAB, 1 1/2" X 2"
DRILLED AND TAPPED TO RECEIVE A
3/8" X 1 1/2" BOLT. TAB TO BE
WELDED TO PLATE PRIOR TO
ELECTROPLATING.

HOLE DIAMETER TO MATCH POLE AT
EACH ELEVATION:
J OR Q:
TOP = 9.21" BOTTOM = 9.56"
K OR R:
TOP = 10.59" BOTTOM = 10.93"

STEEL ANGLE 2" X 2" X 3/16"
WELDED TO STEEL PLATE
(8 PER BRACKET).

1/2" DIAMETER PLATED BOLT 4"
LONG WITH STEEL NUT WELDED
TO ONE LEG OF THE ANGLE
PRIOR TO ELECTROPLATING.

3/4" X 1" SLOTTED HOLES
(TYPICAL 4 PLACES).

PLAN VIEW

ELEVATION

PC-101 PHOTOCCELL. SEE M-72 FOR
PHOTOCCELL SPECIFICATION.

15 AMP GFI OUTLET INSIDE CABINET MOUNTED
IN A 4 SQUARE DEEP METAL GANG BOX WITH
SINGLE GANG RING FOR GFI OUTLET. GFI BOX
SHALL BE POSITIONED BETWEEN THE TOP AND
MIDDLE LAMPS TO ALLOW ACCESS TO GFI
OUTLETS WITH LAMPS INSTALLED.
FIXTURE SHALL BE WIRED TO
THE LINE SIDE OF THE GFI.

STEEL ANGLE 2" X 2" X 3/16"
24" LONG. AT THE POLE END WELD
1/2" NUTS TO RECEIVE THE 1/2"
PLATED BOLTS FROM THE MOUNTING
BRACKETS.

SAG RODS 3/8" DIAMETER STEEL
3 PER SIDE.

1 FLUORESCENT LIGHT ELECTRONIC BALLAST
(EESB-4, 800 MA BALLAST) INSIDE THE
CABINET MOUNTED TO BOTTOM.

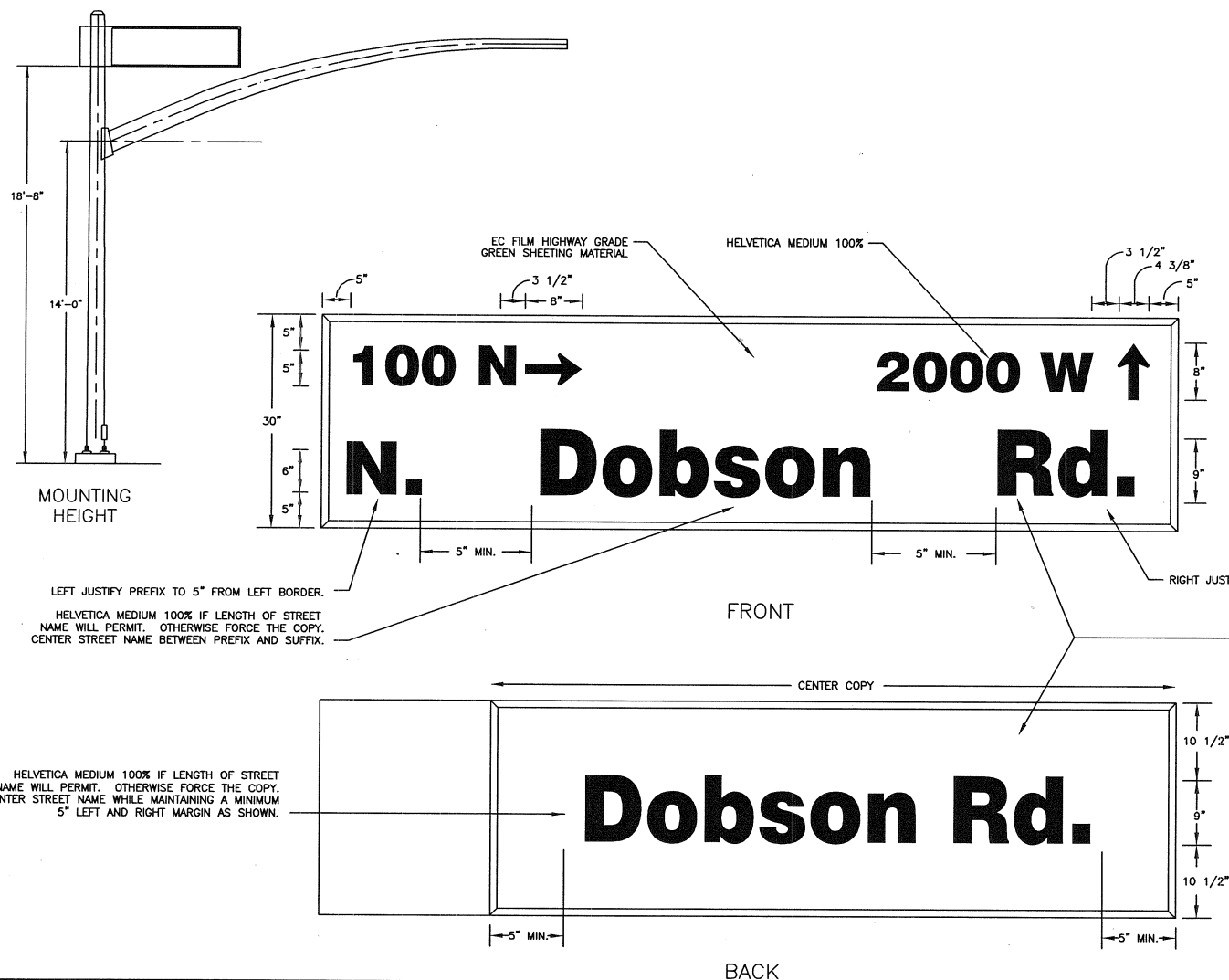
STEEL ANGLE 1 1/2" X 1 1/2" X 1/8"
CUT TO FIT OVER THE EXTRUSION'S
RACEWAY WITH TWO 7/16" HOLES
TO RECEIVE THE BRACING RODS AND
WELD THE RODS IN PLACE.

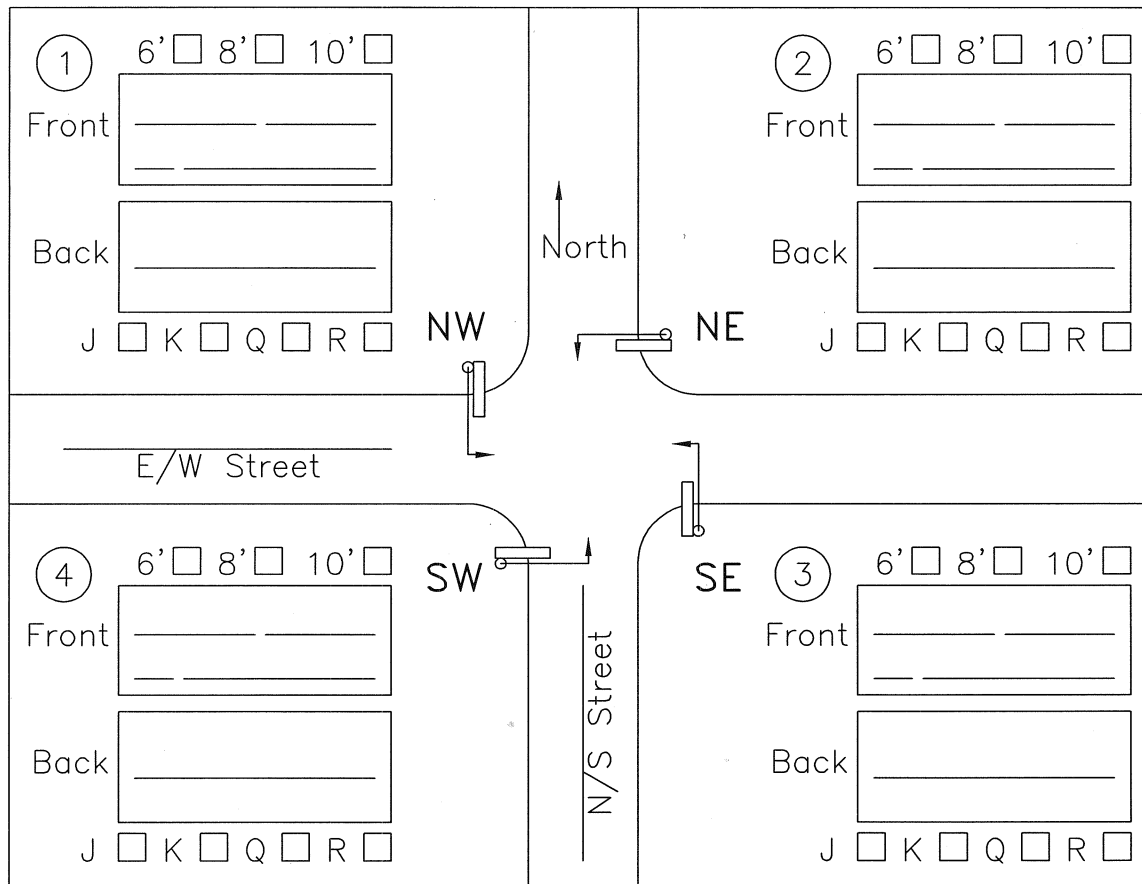
GENERAL NOTES:

1. SEE M-98.1 FOR CABINET CONSTRUCTION DETAILS.
2. SIGN LEGEND SHALL BE AS SHOWN ON PLANS, WITH LAYOUT AS SHOWN ON THIS DETAIL.

WIRING NOTES:

1. SIGN LIGHTING WIRING THROUGHOUT THE MAIN CONDUIT RUNS SHALL CONSIST OF TWO (2) #10 AWG, XHHW, STRANDED, COPPER BLACK CONDUCTORS.
2. THE WIRES SHALL BE TAPED TOGETHER IN EACH PULL BOX AND AT THE CABINET/SERVICE WITH ORANGE TAPE TO IDENTIFY THEM AS THE SIGN LIGHTING CIRCUIT. THE NEUTRAL CONDUCTOR SHALL BE IDENTIFIED WITH WHITE TAPE.
3. SIGN LIGHTING WIRING FROM THE PULL BOX TO THE SIGN ITSELF SHALL CONSIST OF THREE (3) #12 AWG COPPER CONDUCTORS. THE CURRENT CARRYING CONDUCTOR SHALL BE #12 AWG THHN/THWN, STRANDED COPPER, BLACK. THE NEUTRAL CONDUCTOR SHALL BE #12 AWG THHN/THWN, STRANDED COPPER, WHITE. THE GROUND CONDUCTOR SHALL BE GREEN #12 AWG THHN/THWN STRANDED COPPER. THE BLACK AND WHITE CONDUCTORS SHALL RUN CONTINUOUSLY FROM THE PULL BOX INTO THE SIGN'S JUNCTION BOX IN THE SIGN. THE BARE GROUND CONDUCTOR SHALL RUN FROM THE SIGN TO THE HAND HOLE AND BE CRIMPED ALONG WITH THE STREETLIGHT, POLE FOUNDATION, AND MAIN SIGNAL GROUND FROM THE PULL BOX.
4. EACH SIGN SHALL BE PROTECTED BY A 5 AMP FUSE IN A FUSE HOLDER INSTALLED IN THE PULL BOX. THE FUSE HOLDER SHALL BE A BUCHANAN MODEL 6SU OR APPROVED EQUAL.
5. THE SIGN LIGHTING CIRCUIT SHALL BE PROTECTED BY A 20 AMP CIRCUIT BREAKER IN THE TRAFFIC SIGNAL CONTROL CABINET.





GENERAL NOTES:

1. LAYOUT SHEET SHALL BE USED ON ALL TRAFFIC SIGNAL PLANS UNLESS OTHERWISE SPECIFIED.
2. SEE M-98.1 FOR SIGN SPECIFICATION.
3. SEE M-98.2 FOR SIGN LAYOUT AND INSTALLATION.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. MATERIAL SHALL BE 20 GAUGE STEEL WITH PORCELAIN ENAMEL.
3. SIGNS SHALL COMPLY WITH MUTCD SEC. 2B.44

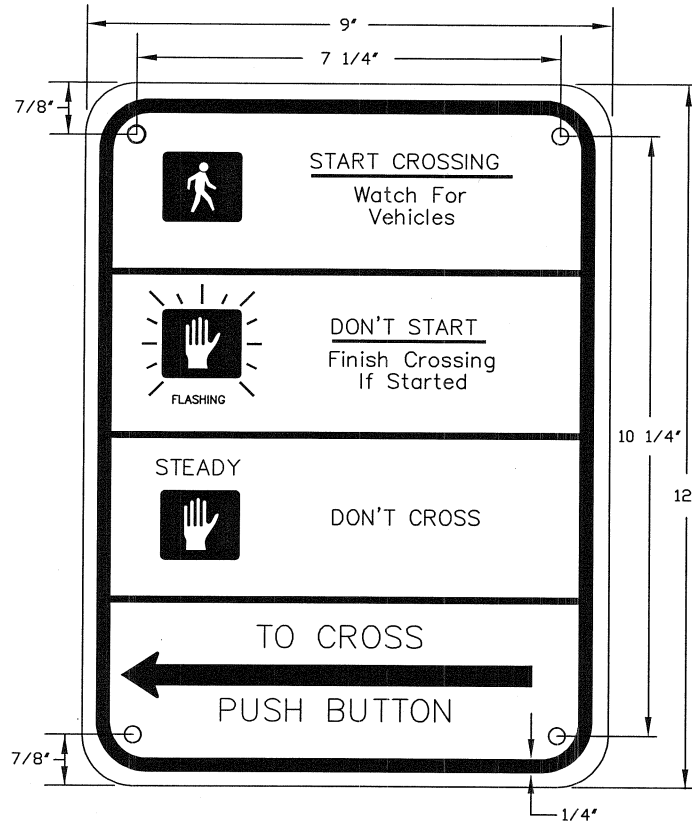
BRASS GROMMETS IN HOLES FOR 1/4" BOLTS

"WALKING PERSON" IN LUNEAR WHITE

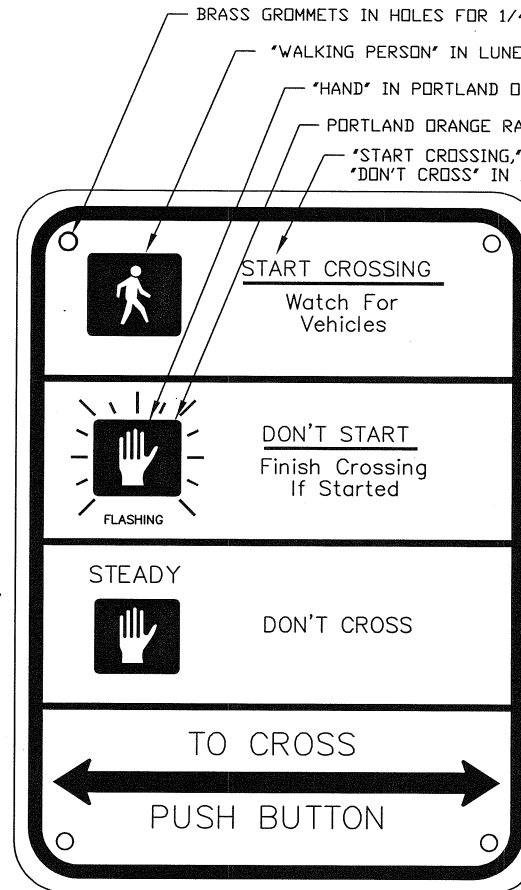
"HAND" IN PORTLAND ORANGE

PORTLAND ORANGE RAYS

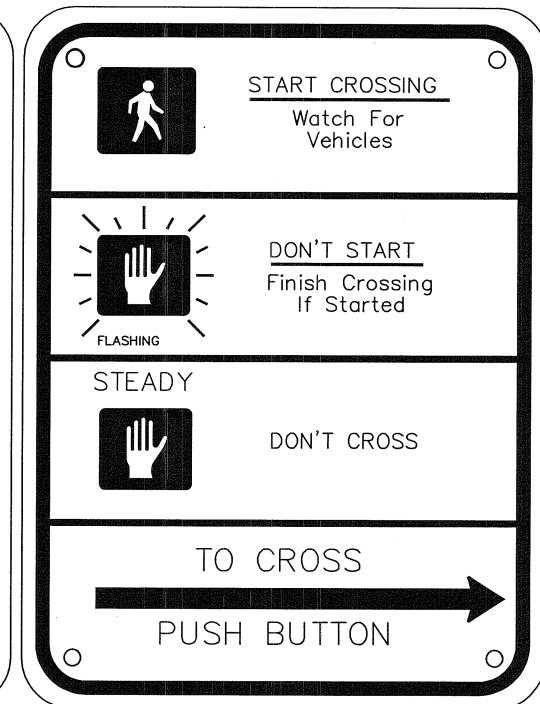
"START CROSSING," "DON'T START," AND "DON'T CROSS" IN BOLD LETTERS



Left
R10-3(L)



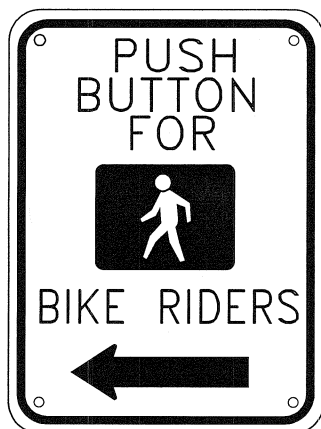
Both
R10-3(B)



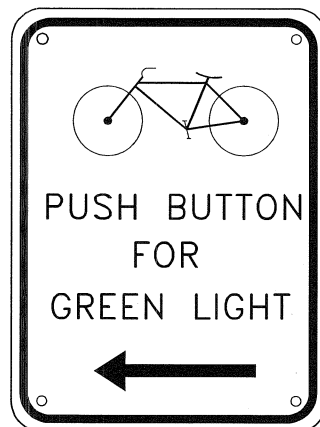
Right
R10-3(R)

PUSH BUTTON STATION SIGNS

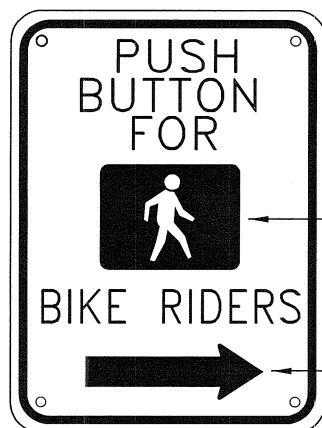
DETAIL NO.
M-99.1



Left



Left

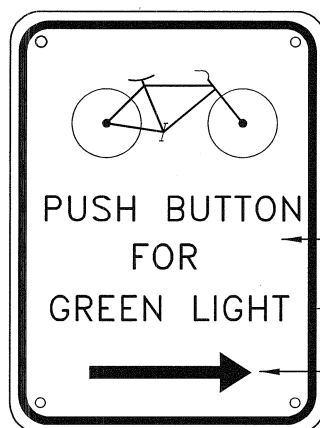


Right

3 1/4" H x 3 1/2" W

3/4" LETTERING

2" H x 4" W



Right

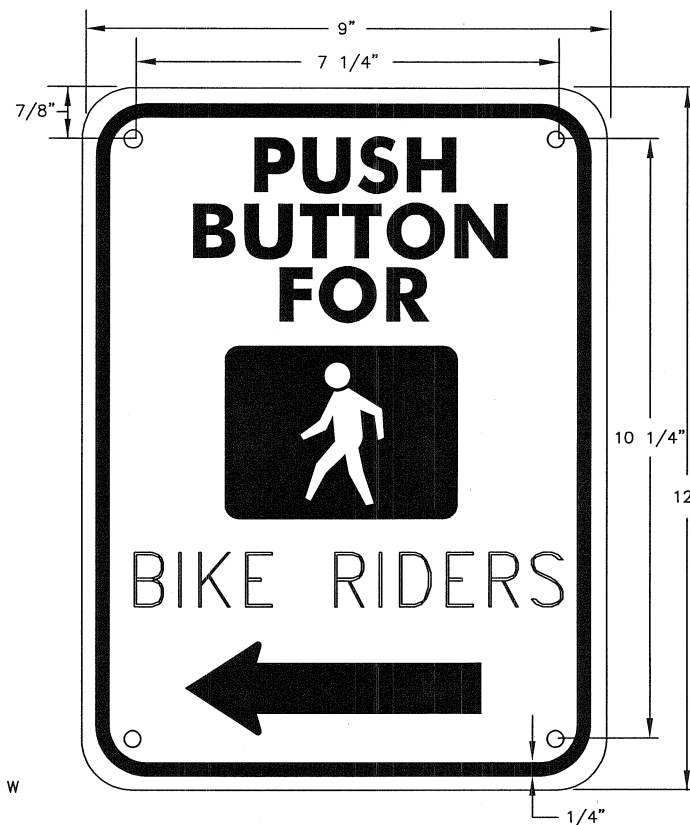
3 1/4" H x 6 1/8" W

1" LETTERING

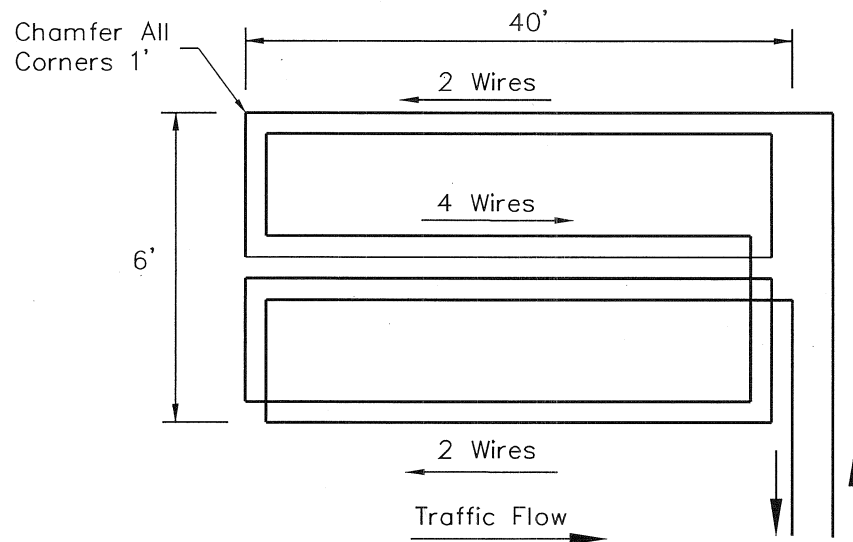
3/4" H x 5" W

GENERAL NOTES:

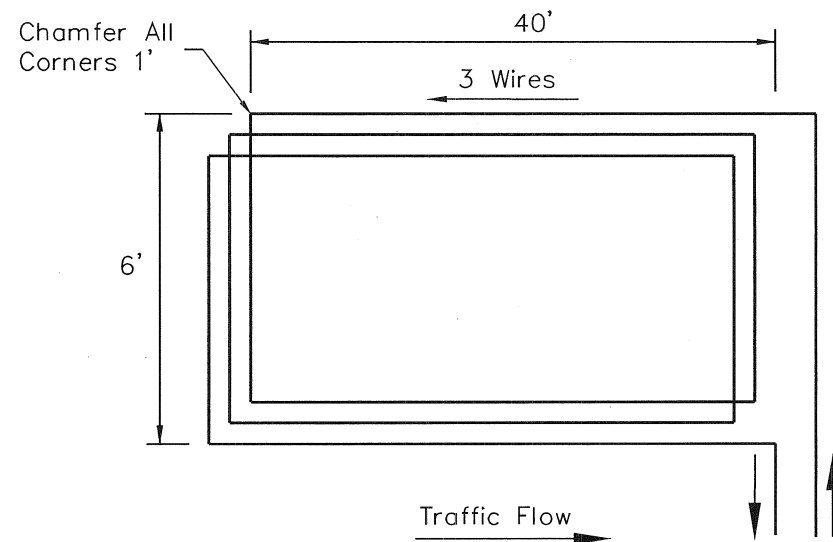
1. ALL DIMENSIONS ARE IN INCHES.
2. MATERIAL SHALL BE 20 GAUGE STEEL WITH PORCELAIN ENAMEL.



TYPICAL DIMENSIONS



**QUADRUPOLE LOOP DETECTOR
For Left Turn Lanes Only**



STANDARD LOOP DETECTOR

NOTES:

1. All loop detectors shall be wire-in-duct type wire. (Detect-a-Duct or approved equivalent, #14 stranded inside a 1/4" PVC tubing (IMSA 51-5).
2. All loop detectors shall be centered in the middle of the applicable traffic lane. Loop shall be sufficiently dimensioned on the plans. Loop detectors shall extend five feet into the crosswalk unless directed otherwise by the Traffic Engineering Department.
3. A rectangular loop with 3 turns (6 feet x 40 feet) shall be used for all through lanes.
4. A quadrupole loop with 2 outside turns and 4 inside turns (6 feet x 40 feet) shall be used in all exclusive left-turn lanes. (Wire in middle cut shall run the same direction).
5. Loop detectors shall not be installed in exclusive right turn lanes.
6. The location of permanent count detector loops shall be specified by the Traffic Engineering Department. Count detector loops shall consist of a minimum of 4 turns (6 feet x 6 feet).
7. Pre-formed loop detectors conforming to the latest ADOT specifications shall be used under decorative pavement, "pavers", concrete, or other "special" roadway surfaces, or as directed by the Traffic Engineering Department.
8. Lead-in cable between loop wire and controller shall be latest ADOT specification or approved equivalent (IMSA 50-2).
9. Loop lead-in and splices in pull box shall be twisted and soldered. Griggs Loop Detector Sealant, 3-M Loop Sealant, or approved equivalent shall be used.
10. Loops shall be installed prior to the installation of the final pavement lift (if part of a paving project).
11. Loops shall be inspected and tested prior to acceptance by the City.
12. See ADOT TS 7-1 for installation details.

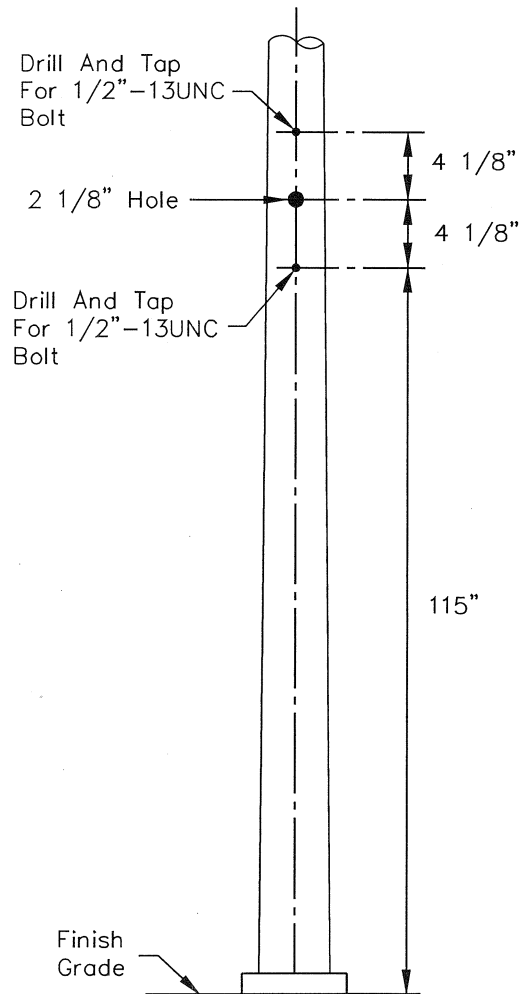
DETAIL NO.
2137

**City of Scottsdale
Standard Details**

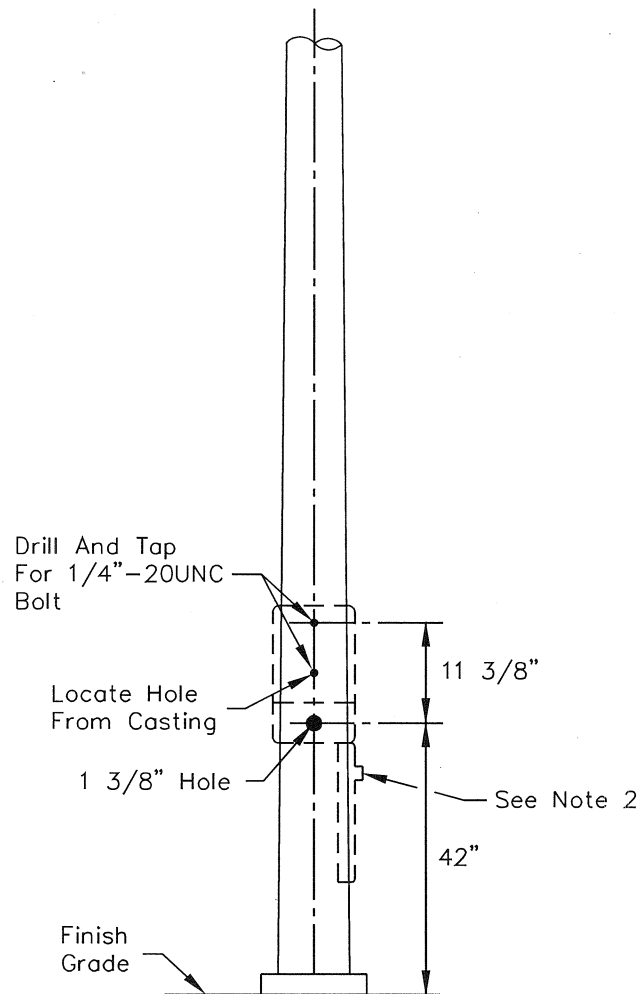
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

LOOP DETECTORS

DETAIL NO.
2137



SIDE MOUNT DRILLING DETAIL



PUSH BUTTON DRILLING DETAIL

NOTES:

1. Drilling of pole to be oriented according to pole layout, or as directed by C.O.S. Engineer in the field.
2. When two pedestrian push button assemblies are mounted on a small diameter pole the lower assembly shall be positioned upside down so that the push button is at the top and the sign is below.
3. Top mounting holes to be field drilled in order to allow for manufacturing variations.
4. Push button shall be A.D.A large target style (ADOT Type I).

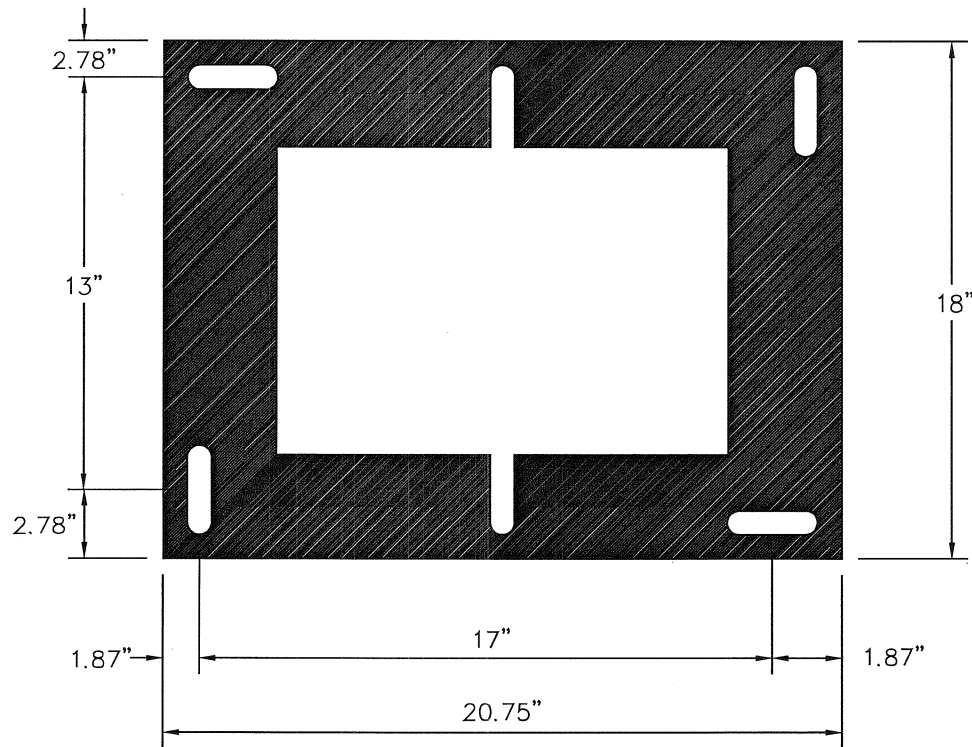
DETAIL NO.
2138

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

SIGNAL POLE DRILLING DETAIL

DETAIL NO.
2138



INSIDE VIEW OF BOTH
SIDES OF BASE EXTENDER

1. Model 330 cabinet base extenders will include cutouts that will accommodate replacement with all other Scottsdale 330 cabinets and model 336S. These base extenders are available from the cabinet manufacturer. All Scottsdale cabinets are foundation mounted.
2. Foundation must include a 4" x 24" x 24" concrete pad in front of the cabinet door.
3. The cabinet shall be mounted in such a way that when the technician has the door open and is facing the cabinet, he is also facing the intersection.
4. Cabinet base extender shall have a 12" x 12" removable access panel. Base extender shall be installed so that access panel is on door side of cabinet.

DETAIL NO.
2139

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

TRAFFIC SIGNAL CONTROLLER CABINET BASE EXTENDER

DETAIL NO.
2139

LOOP AND PEDESTRIAN PUSH BUTTON INPUTS

Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Slot 7	Slot 8	Slot 9	Slot 10	Slot 11	Slot 12	Slot 13	Slot 14
1 AB Ph 1	3 AB Ph 2	5 AB Ph 3	7 AB Ph 4	9 AB Ph 5	11 AB Ph 6	13 AB Ph 7	15 AB Ph 8	17 AB 2 PPB	19 AB 4PPB	21 AB RRPre	23 AB AdvEn	25 AB EV A	27 AB Stop Time
2 AB Ph 1	4 AB Ph 2	6 AB Ph 3	8 AB Ph 4	10 AB Ph 5	12 AB Ph 6	14 AB Ph 7	16 AB Ph 8	18 AB 6 PPB	20 AB 8PPB	22AB Flash	24 AB Adv	26 AB EV B	28 AB 6 Call
Det Loops	Det Loops	Det Loops	Det Loops	Det Loops	Det Loops	Det Loops	Det Loops	Ped Push Buttons	Ped Push Buttons	-----	-----	Pre- Empt	Slot 14 ----- Slot 14

1. All Scottsdale model 330 cabinet input racks have 14 slots.
2. Slots 1–8 are for vehicle detector loops.
3. Phase 4 loops are terminated on slot 4 (7A&B and/or 8A&B).
4. Phase 4 pedestrian push button is terminated on 19A and ppb neutral on 19B.
5. 19B shall have a jumper to the neutral bar.
6. All two phase intersections are to be wired to phases 2 and 4.
7. Field output wiring for 2 phase signals shall be wired to 2R, 2Y, 2G and 4R, 4Y, 4G.
8. Ped field wiring shall be wired to 9R, 9G (Phase 2 Ped) and 10R, 10G (Phase 4 Ped).
9. Call COS Traffic Signals (480)312–5635 prior to wiring cabinet for instructions for intersections with more than 2 phases.

DETAIL NO.
2140

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

MODEL 330 INPUT RACK WIRING INSTRUCTIONS

DETAIL NO.
2140

MAIN DIRECTIONS

Direction	Color
WB	Blue
EB	Green
NB	Red
SB	Yellow

**LEFT TURN DIRECTIONS
(Main Color + White)**

Direction	Color
WBLT	Blue + White
EBLT	Green + White
NBLT	Red + White
SBLT	Yellow + White

**RIGHT TURN DIRECTIONS
(Main Color + Black)**

Direction	Color
WBRT	Blue + Black
EBRT	Green + Black
NBRT	Red + Black
SBRT	Yellow + Black

**Color Of Wire For
Power/Neutrals/Pushbuttons**

Wire	Color
AC+ Power	Black
AC- (Neutral)	White
24V Pushbutton	Orange, Stranded

WBLT = West Bound Left Turn and shall be the phase for vehicles facing west and turning to south

EBLT = East Bound Left Turn and shall be the phase for vehicles facing east and turning to north

NBLT = North Bound Left Turn and shall be the phase for vehicles facing north and turning to west

SBLT = South Bound Left Turn and shall be the phase for vehicles facing south and turning to east

WBRT = West Bound Right Turn and shall be the phase for vehicles facing west and turning to north

EBRT = East Bound Right Turn and shall be the phase for vehicles facing east and turning to south

NBRT = North Bound Right Turn and shall be the phase for vehicles facing north and turning to east

SBRT = South Bound Right Turn and shall be the phase for vehicles facing south and turning to west

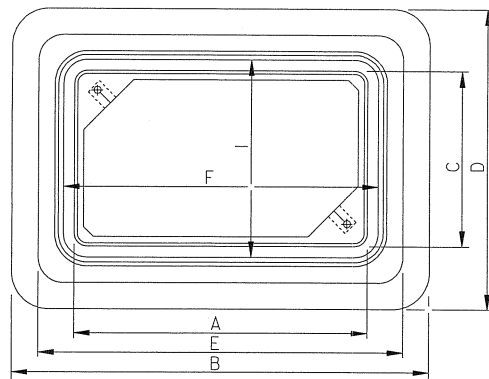
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**City of Scottsdale
Standard Details**

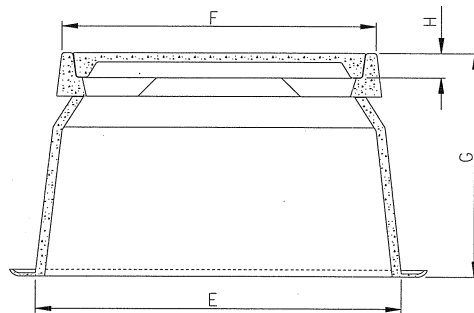
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**Scottsdale Standards &
Specifications Committee**

TAPE COLOR CODES FOR TRAFFIC SIGNAL WIRING

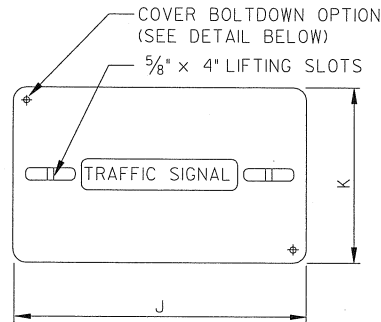
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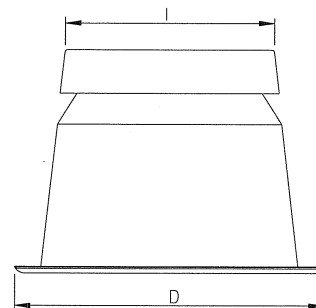
PULL BOX PLAN



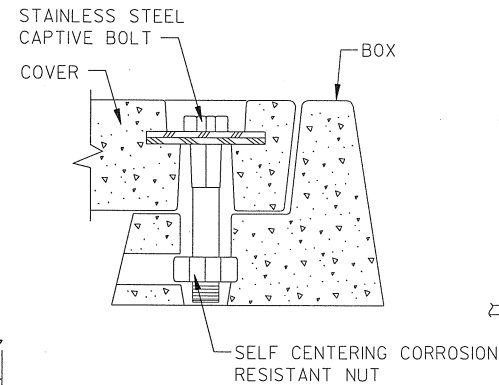
PULL BOX SECTION



COVER VIEW



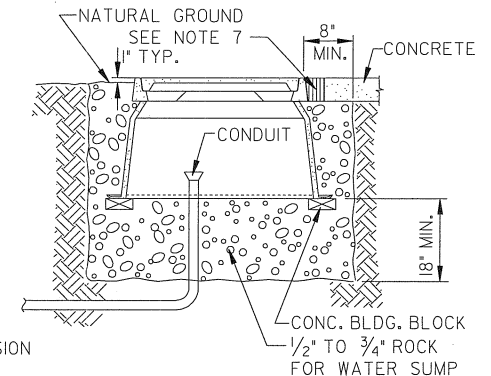
SIDE VIEW



BOLTDOWN DETAIL

GENERAL NOTES

1. BOX AND COVER SHALL BE CONCRETE OR COMPOSITE.
2. COVERS SHALL BE SECURED WITH 3/8" BOLTS, NUTS & WASHERS, WHICH SHALL BE OF BRASS, STAINLESS STEEL OR OTHER CORROSION RESISTANT MATERIAL. STAINLESS STEEL SHALL HAVE A CHROMIUM CONTENT OF NOT LESS THAN 18 % AND A NICKEL CONTENT OF NOT LESS THAN 8 %. NUTS SHALL BE RECESSED BELOW TOP SURFACE OF COVER.
3. COVER LETTERING SHALL BE 1/2" MINIMUM LETTERS CAST IN STANDARD MARKINGS: (TRAFFIC SIGNAL).
4. CONDUIT ENTERING THE BOX SHALL HAVE A 90 DEGREE LONG RADIUS BEND (INSIDE THE BOX). THE CONDUIT'S OPENING, INSIDE THE BOX, SHALL BE AT LEAST 4" BELOW THE LID, OPENING SHALL HAVE SMOOTH EDGE. IF THE CONDUIT IS P.V.C., A SLIP COUPLING MUST BE USED. IF THE CONDUIT IS RIGID PIPE, A PROTECTIVE BUSHING SHALL BE USED.
5. CONDUCTORS SHALL HAVE A MINIMUM OF 24" SLACK FROM CONDUIT BELL END.
6. BACKFILL WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACT.
7. WHERE PULLBOXES ARE INSTALLED IN CONCRETE AREAS, 1/2" PREMOLDED EXPANSION JOINT SHALL BE INSTALLED AROUND THE PULL BOX.



INSTALLATION DETAIL

PULL BOX TYPE	A	B	C	D	E	F	G	H	I	J	K
3 1/2	15 9/16"	23 3/4"	10 5/16"	18 1/2"	21 1/4"	17 1/16"	12"	1 3/4"	11 13/16"	15 3/8"	10 1/8"
5	23 1/2"	33 1/2"	14"	24"	29 1/4"	25 1/4"	12"	2"	15 3/4"	23 1/4"	13 3/4"
7	30 3/4"	40 3/4"	17 3/4"	27 3/4"	36 3/4"	32 1/2"	12"	2"	19 1/2"	30 1/2"	17 1/2"

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ CITY ENGINEER _____ DATE _____

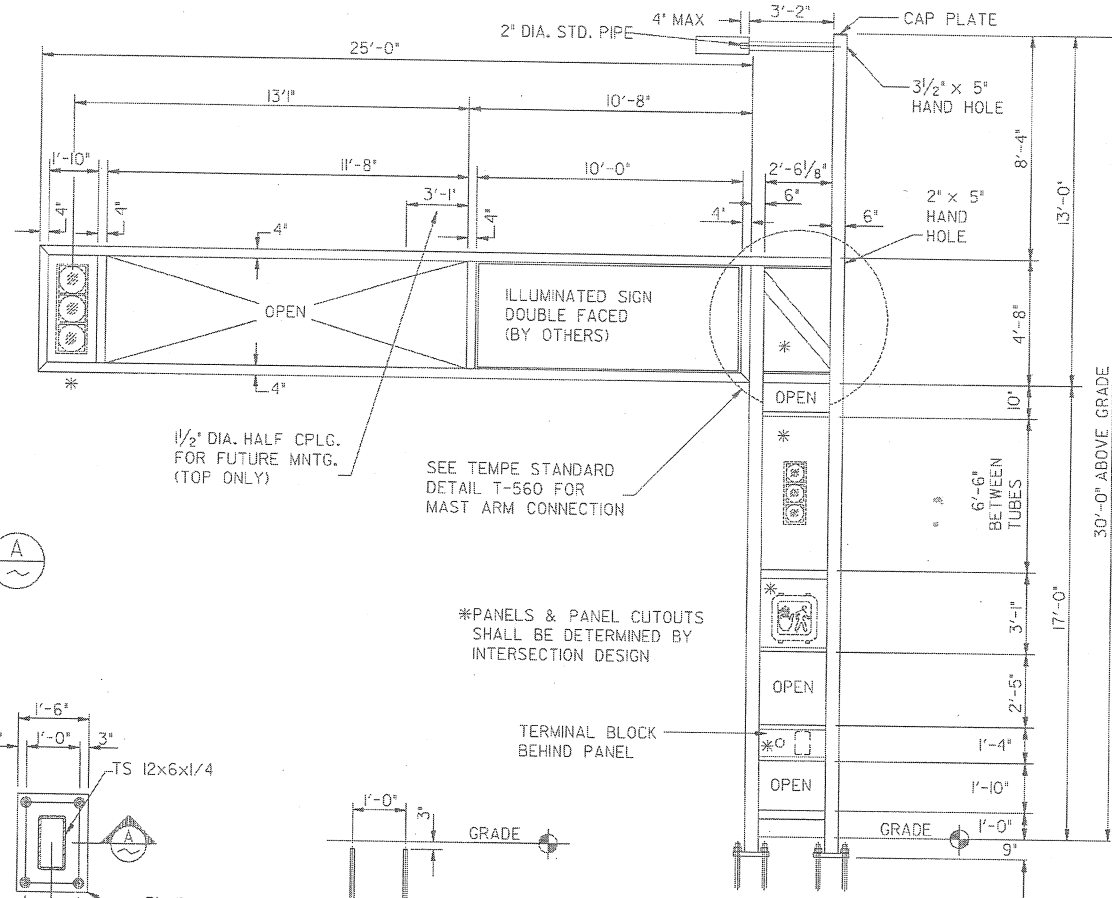
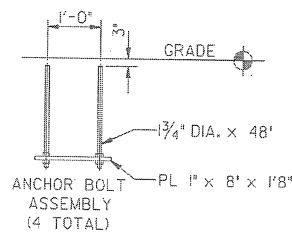
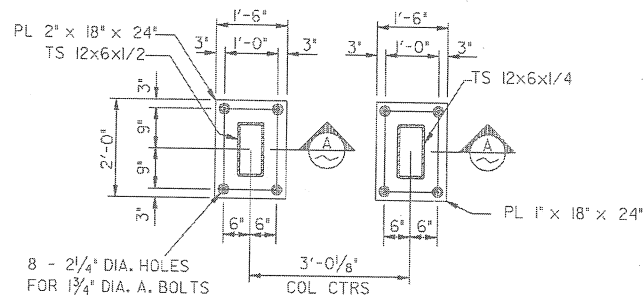
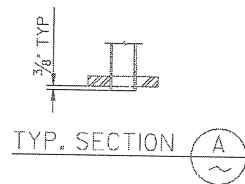


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL PULL BOXES

DETAIL T-453

REVISED 1998



APPROVED: _____ DATE _____
PUBLIC WORKS MANAGER

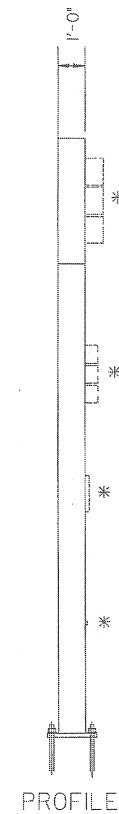
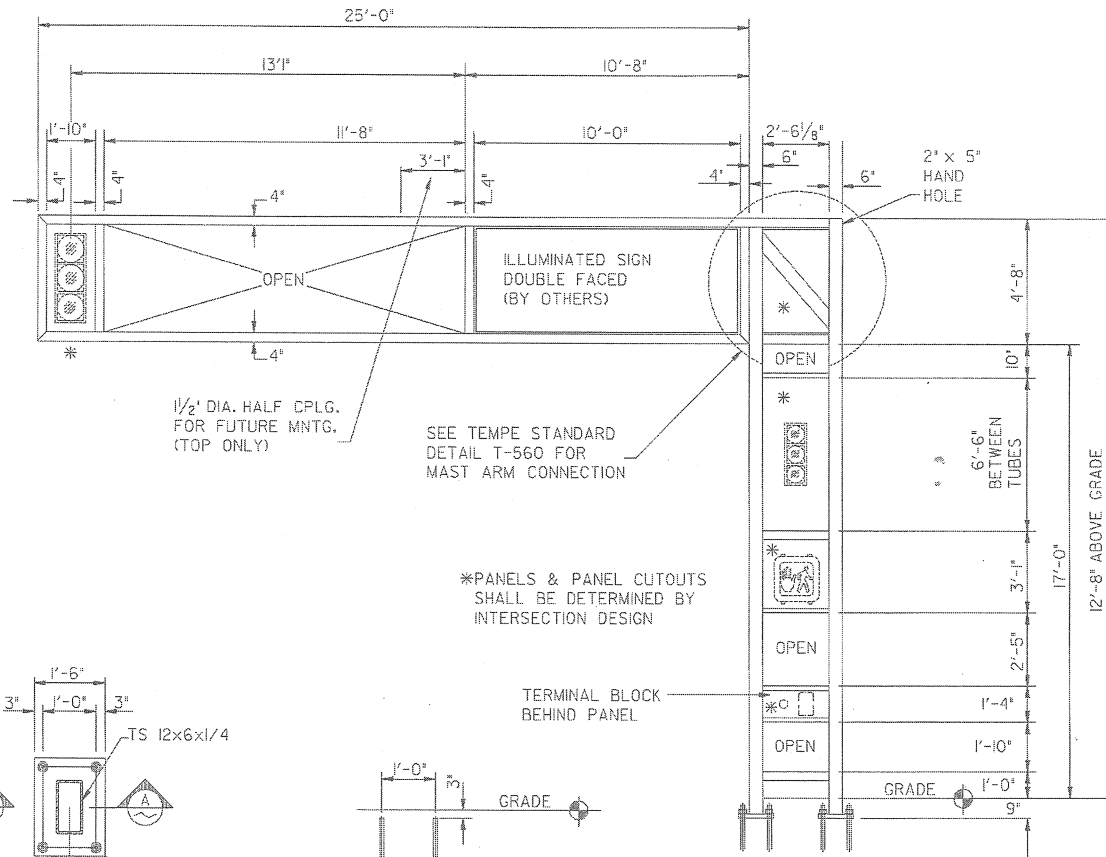
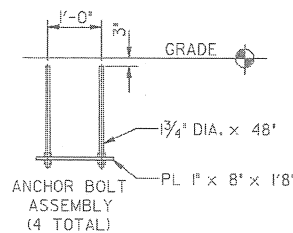
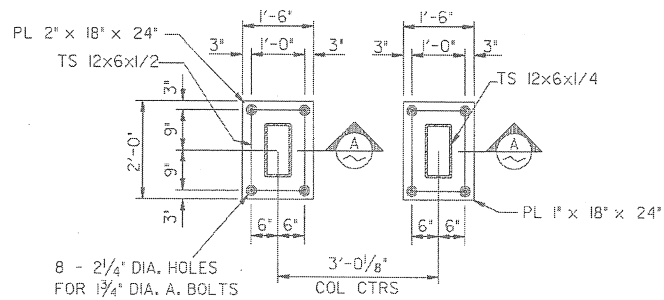
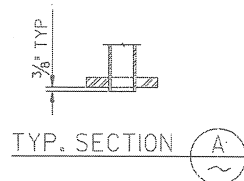
APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

MODULAR POLE 'Q' - 25' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-540
DRAWN 2005



APPROVED: _____ DATE _____
PUBLIC WORKS MANAGER

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

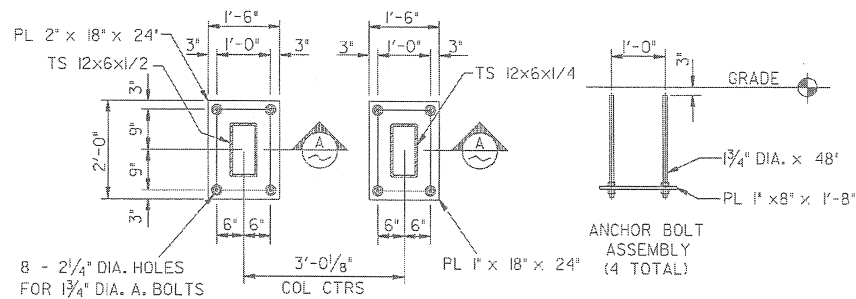
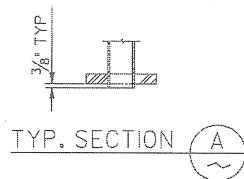


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

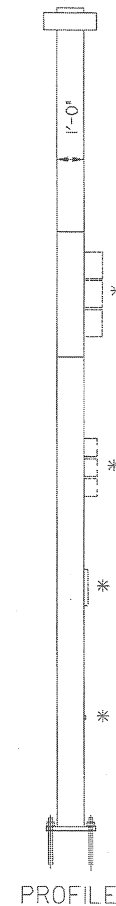
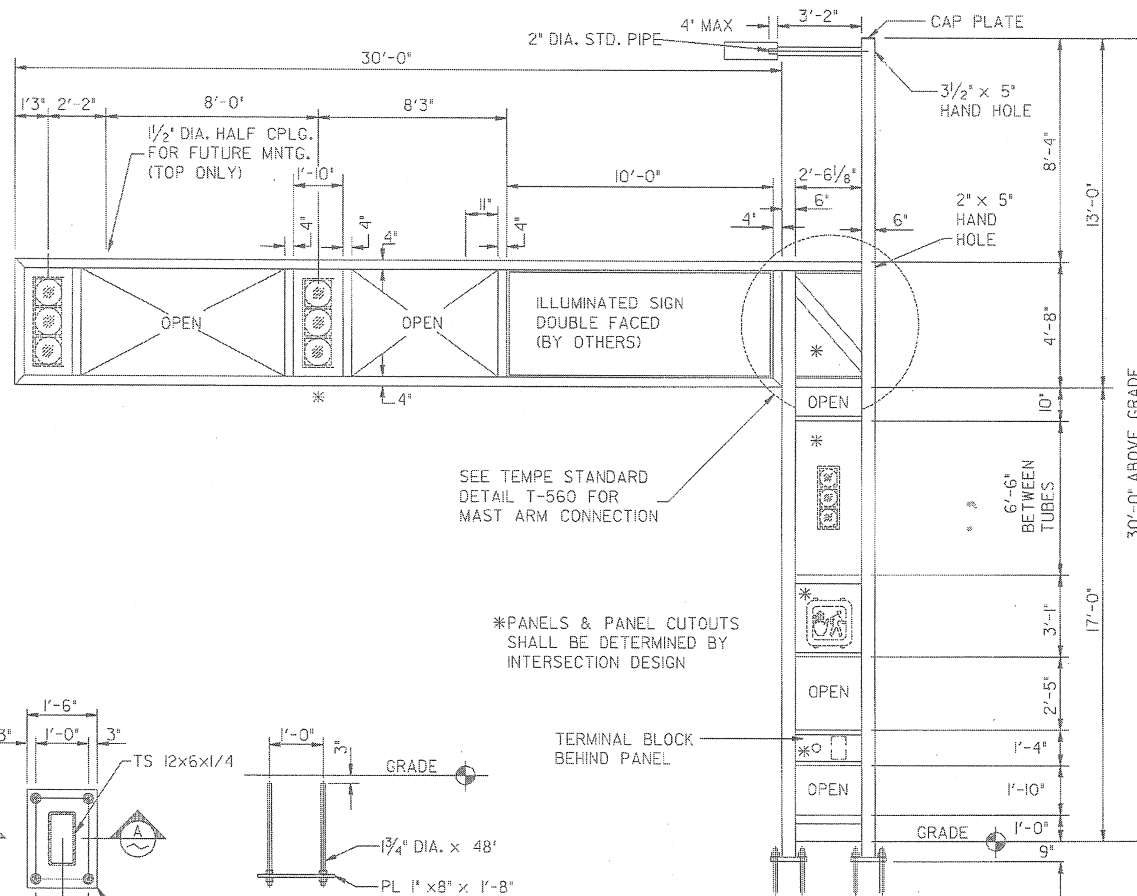
MODULAR POLE 'J' - 25' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-541
DRAWN 2005



ANCHOR BOLT SETTING PLAN



APPROVED: _____ DATE _____
PUBLIC WORKS MANAGER

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

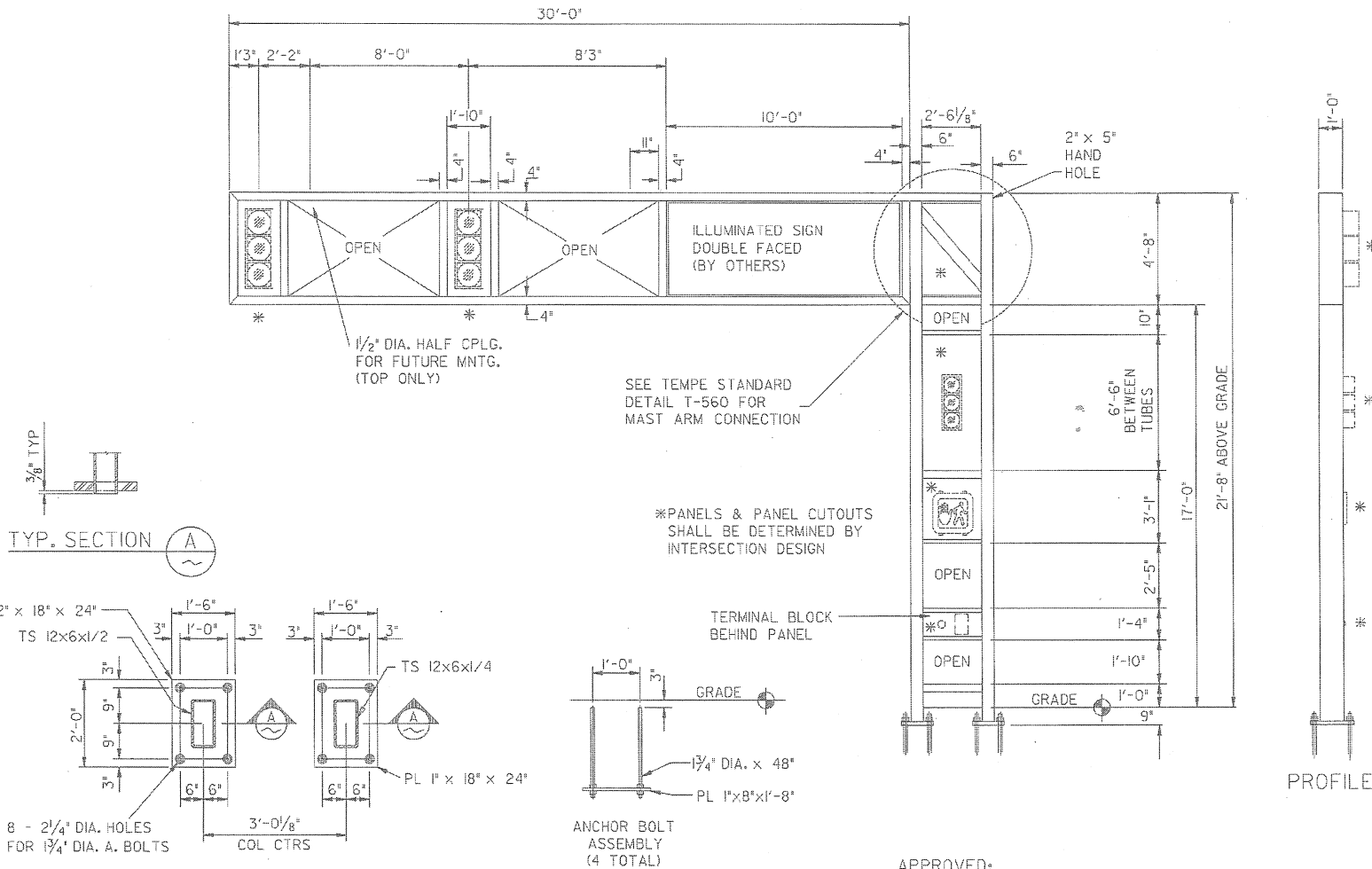


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

MODULAR POLE '0' - 30' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-544
DRAWN 2005



ANCHOR BOLT SETTING PLAN

APPROVED: _____ DATE _____
PUBLIC WORKS MANAGER

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

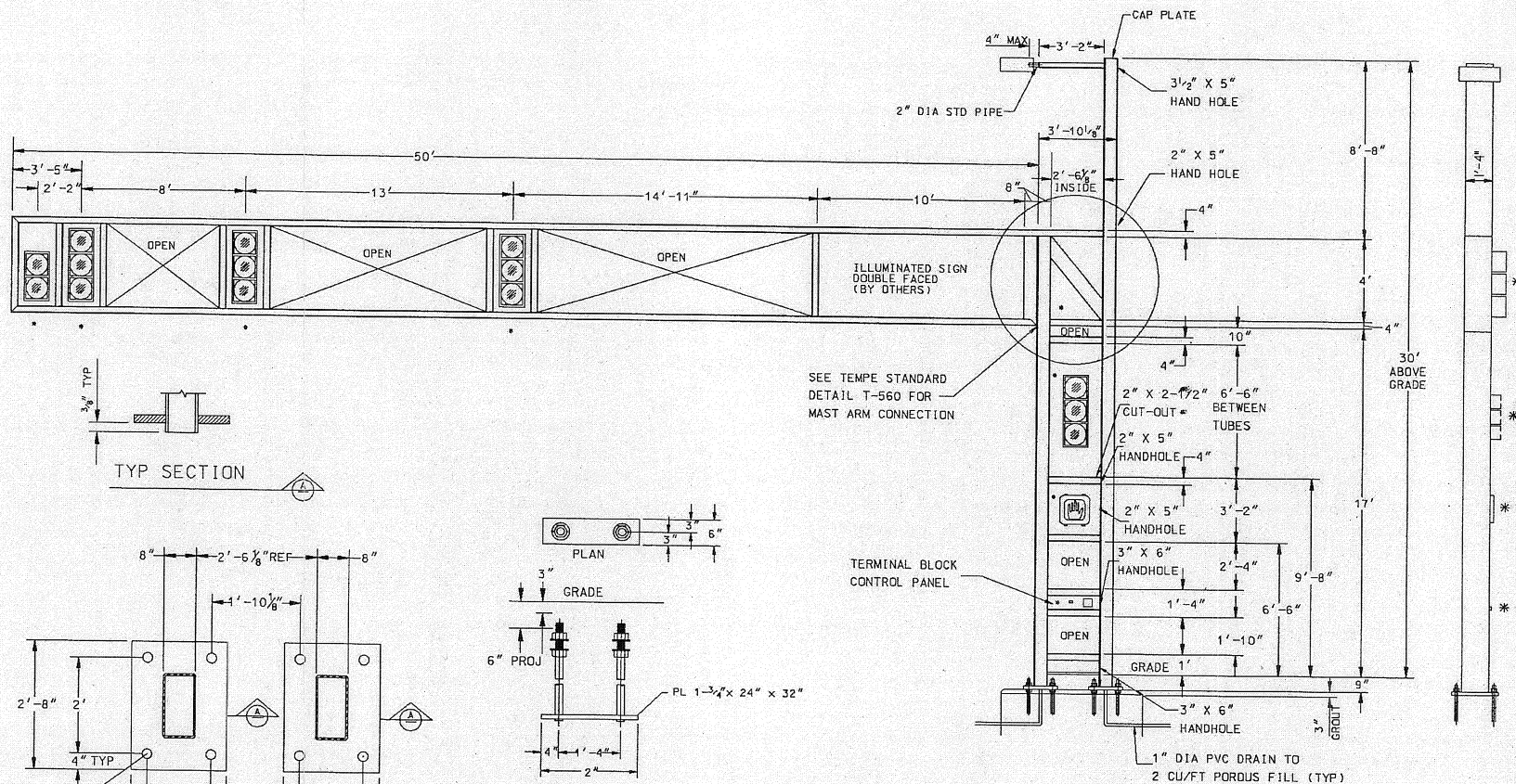


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

MODULAR POLE 'J' - 30' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-545
DRAWN 2005



SEE TEMPE STANDARD
DETAIL T-560 FOR
MAST ARM CONNECTION

TERMINAL BLOCK
CONTROL PANEL

1. ALL TUBING WELDS SHOULD
BE TURNED INSIDE.
- *2. PANELS AND PANEL CUTOUTS
SHALL BE DETERMINED BY
INTERSECTION DESIGN.

APPROVED: _____
PUBLIC WORKS MANAGER DATE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER DATE

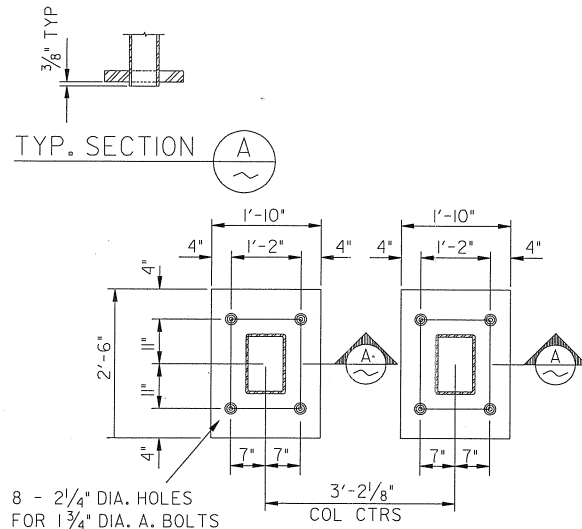
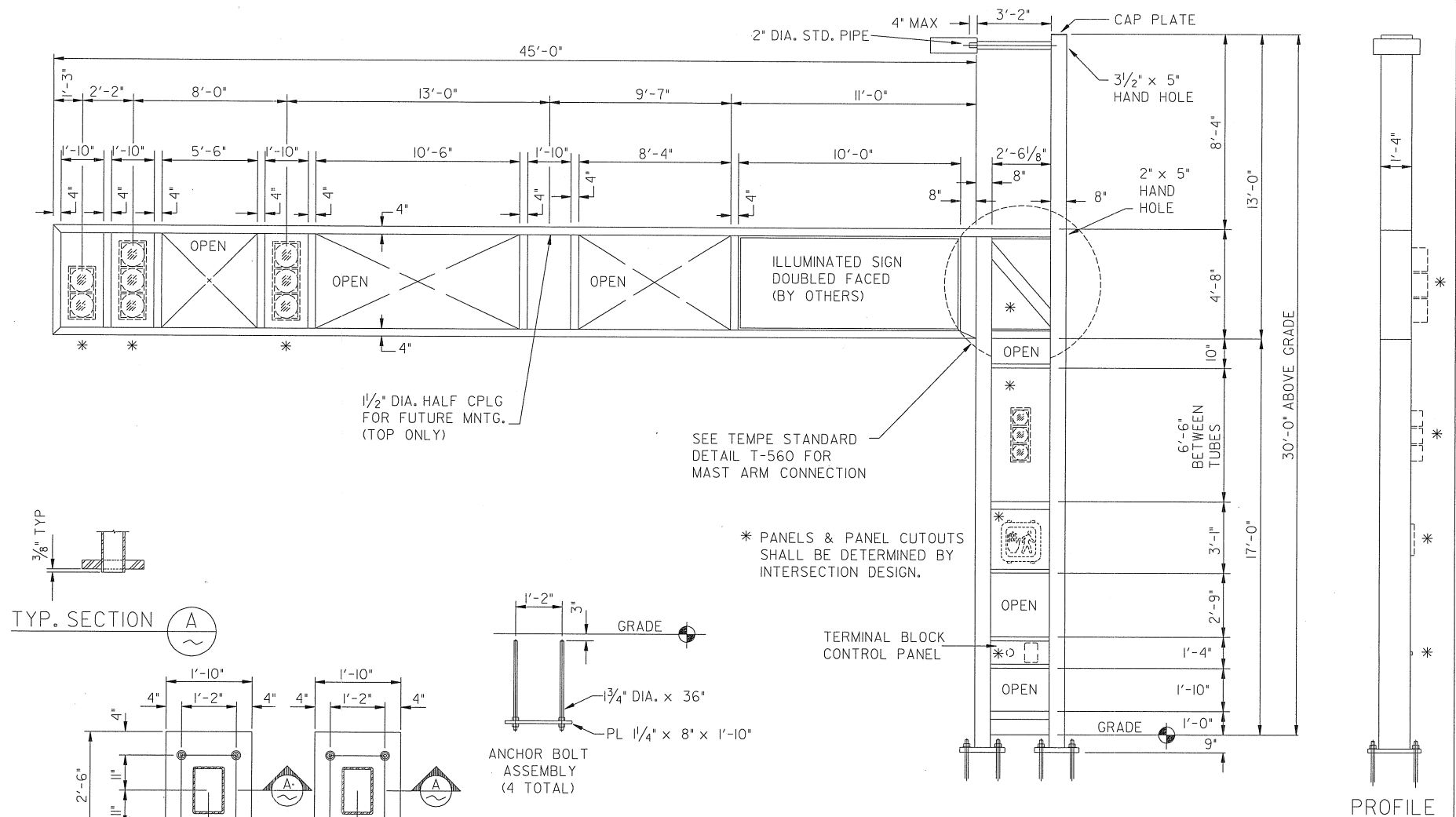


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

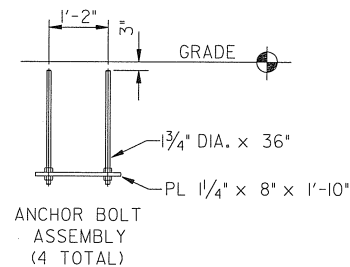
MODULAR POLE 'Q' - 50' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-548
DRAWN 2004



ANCHOR BOLT SETTING PLAN



ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

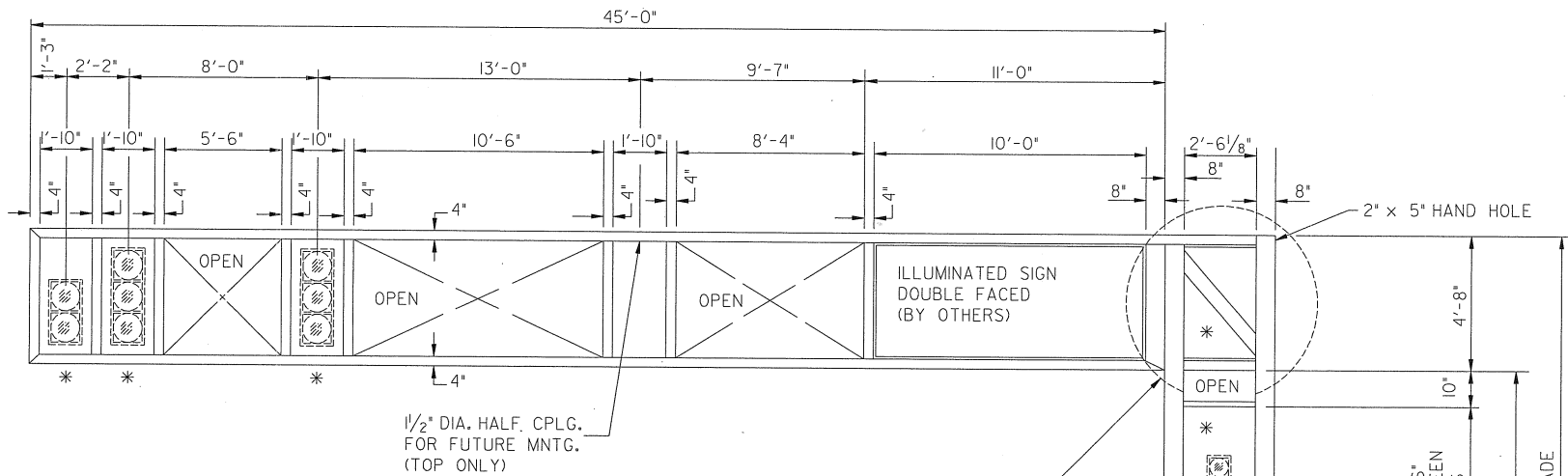


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

MODULAR POLE 'Q' - 45' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-550
REVISED 2001

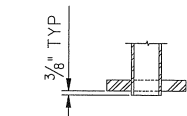


SEE TEMPE STANDARD
DETAIL T-560 FOR
MAST ARM CONNECTION

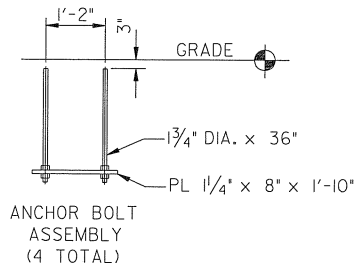
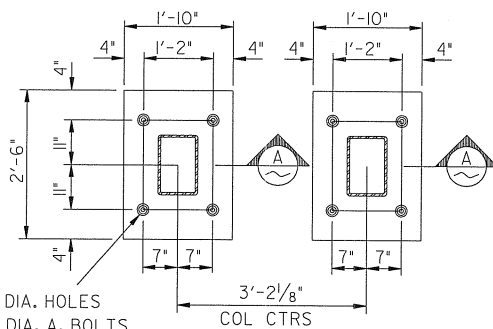
* PANELS & PANEL CUTOUTS
SHALL BE DETERMINED BY
INTERSECTION DESIGN

TERMINAL BLOCK
BEHIND PANEL

PROFILE



TYP. SECTION A



ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

DATE _____

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

DATE _____

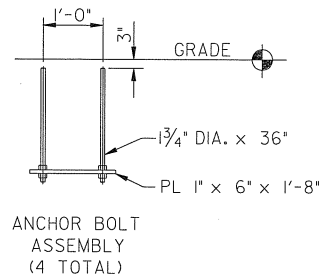
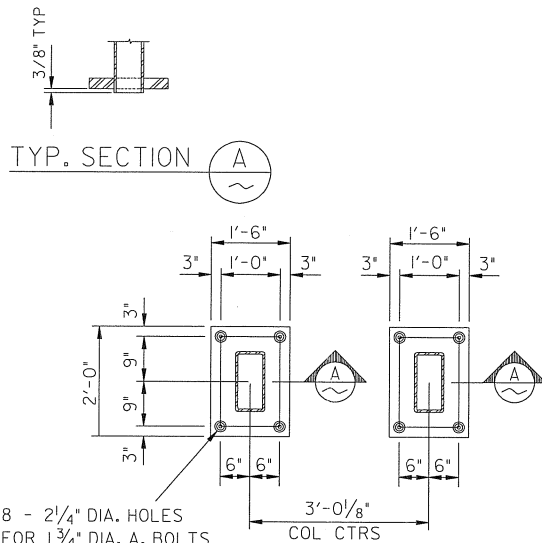
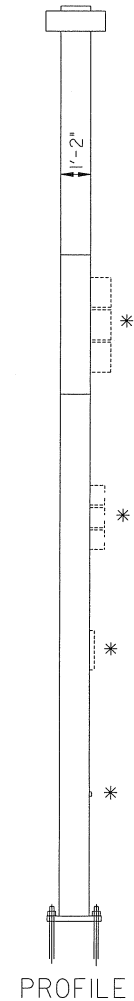
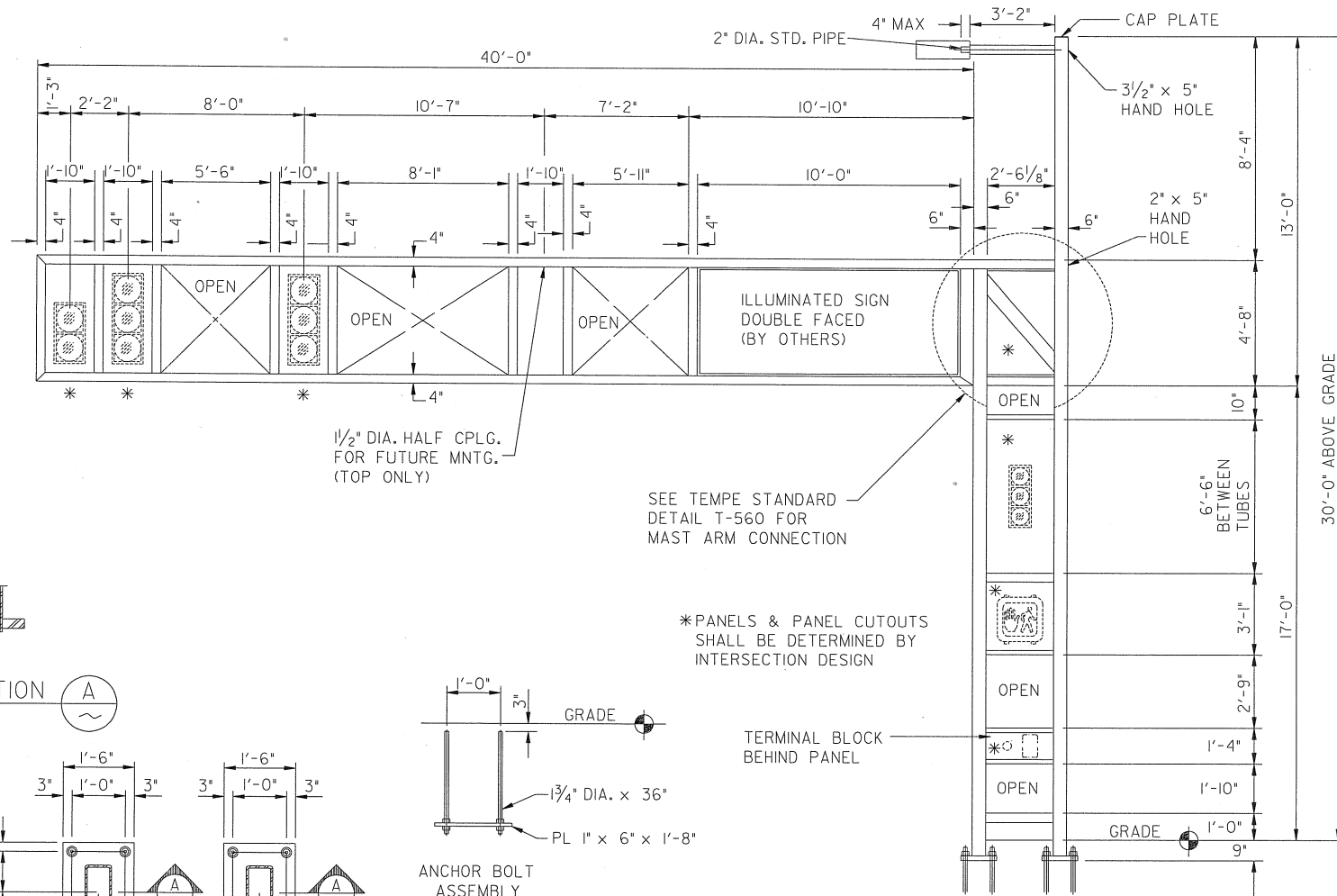


ANCHOR BOLT SETTING PLAN
PUBLIC WORKS DEPARTMENT

MODULAR POLE 'J' - 45' MAST ARM

ASSEMBLY DRAWING ONLY
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T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-551
REVISED 2001



*PANELS & PANEL CUTOUTS
SHALL BE DETERMINED BY
INTERSECTION DESIGN

TERMINAL BLOCK
BEHIND PANEL

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION DATE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER DATE

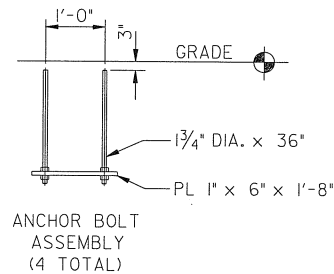
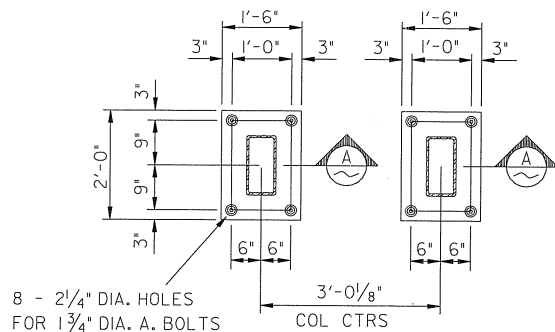
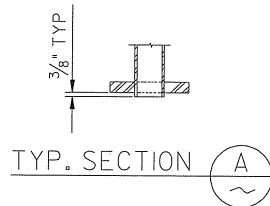
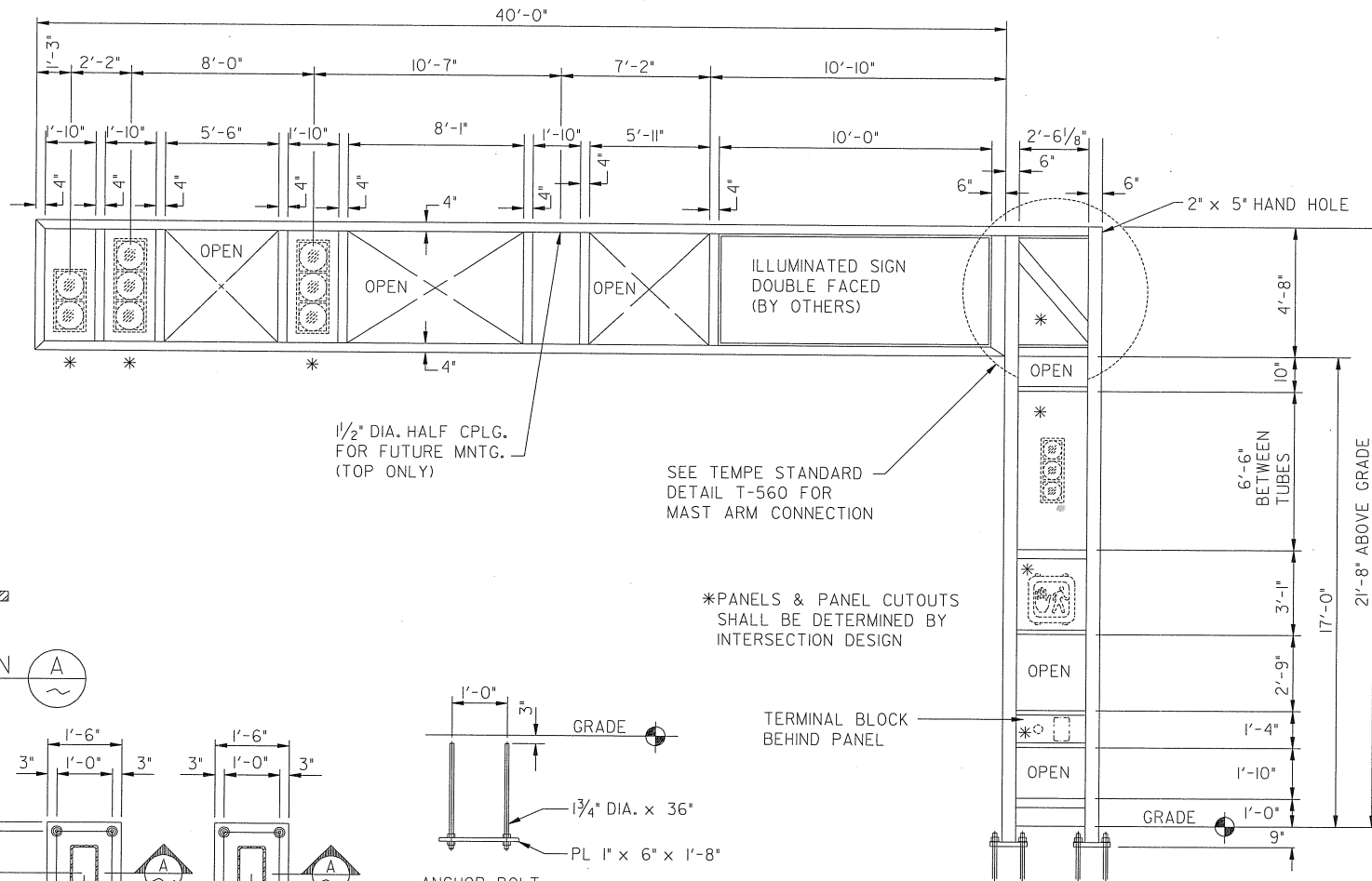


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

MODULAR POLE 'Q' - 40' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-552
REVISED 2001



TERMINAL BLOCK
BEHIND PANEL

PROFILE

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

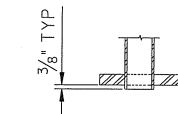
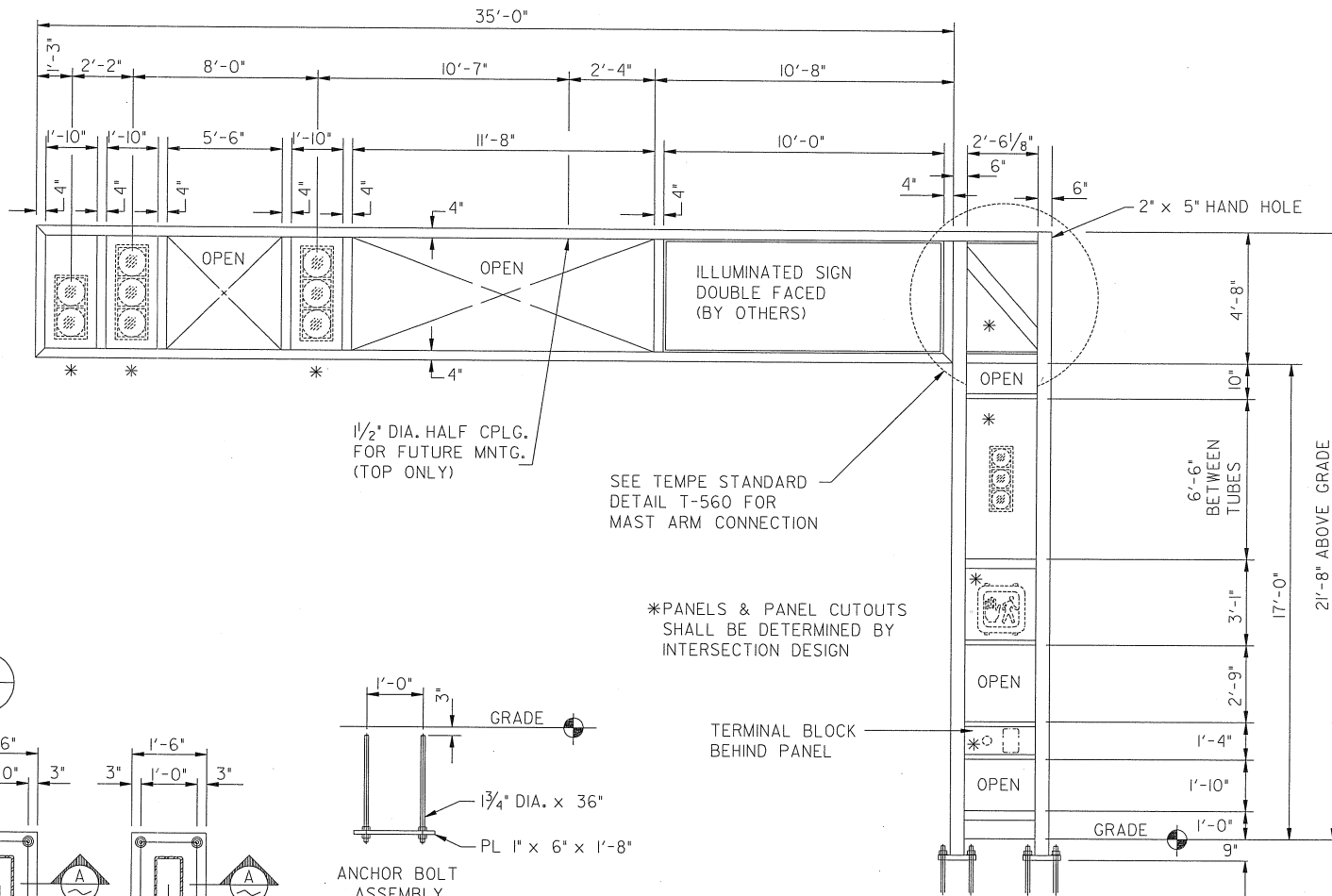


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

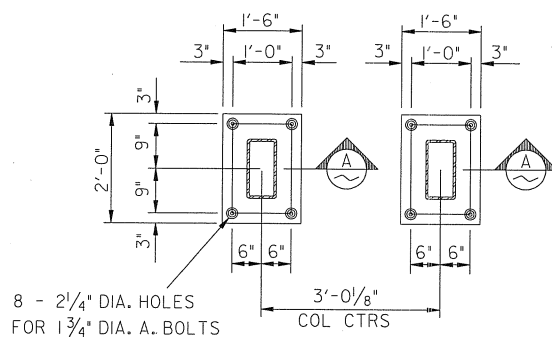
MODULAR POLE 'J' - 40' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

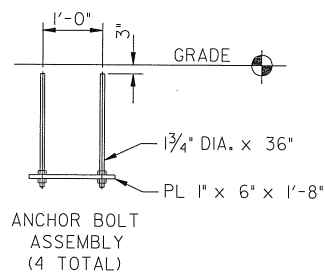
DETAIL T-553
REVISED 2001



TYP. SECTION A

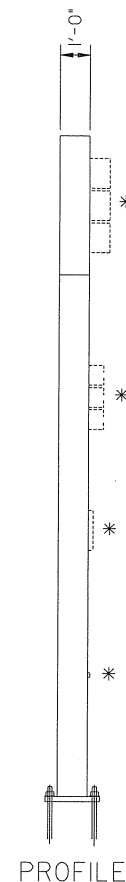


ANCHOR BOLT SETTING PLAN



*PANELS & PANEL CUTOUTS SHALL BE DETERMINED BY INTERSECTION DESIGN

TERMINAL BLOCK BEHIND PANEL



PROFILE

ORIGINAL SIGNATURE ON FILE AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

DATE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

DATE

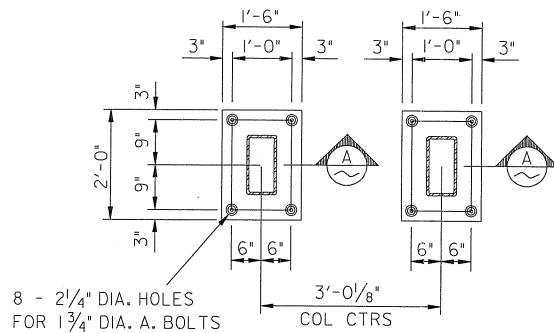
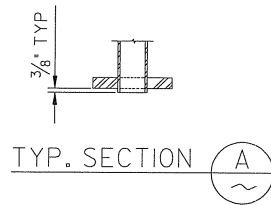
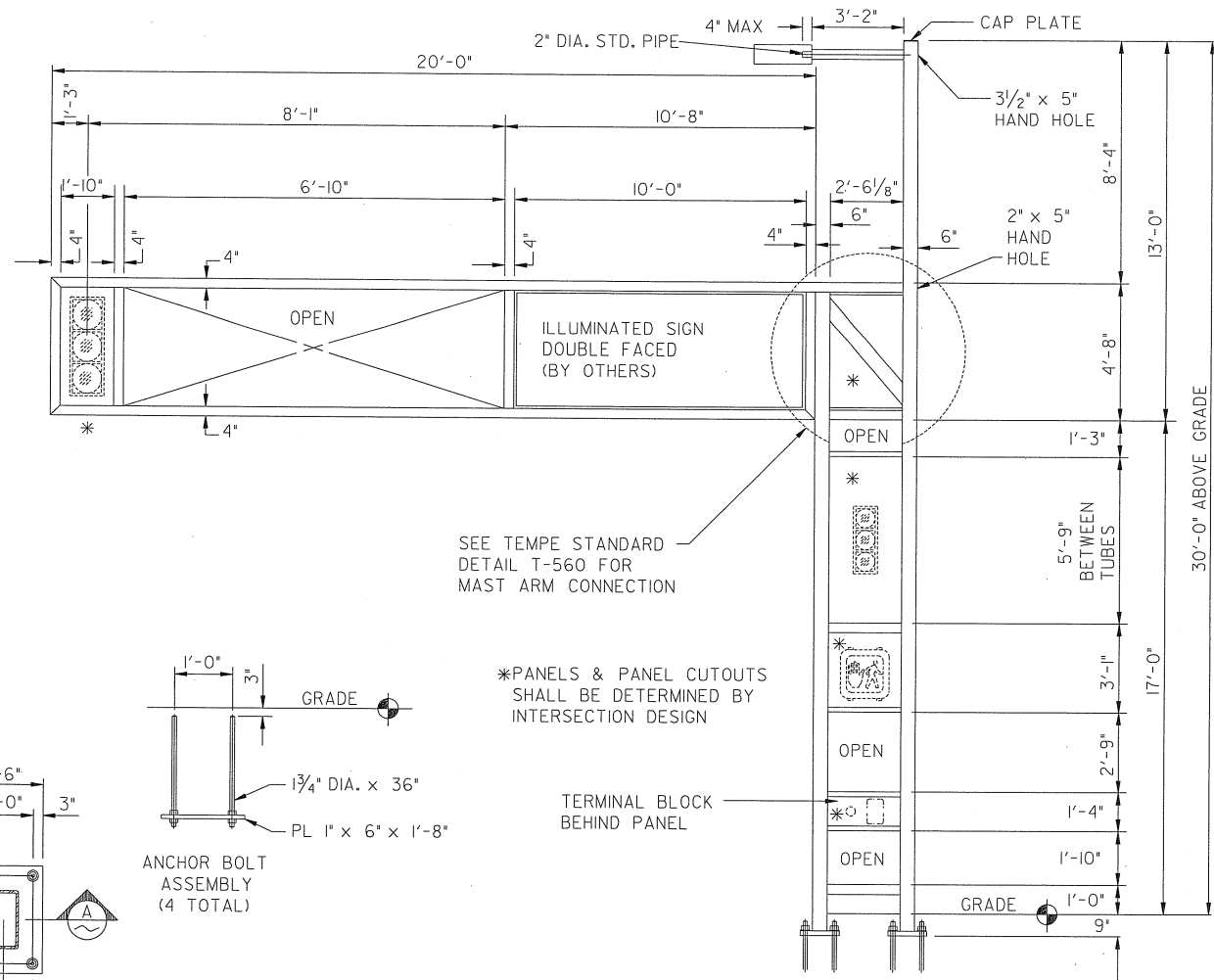


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

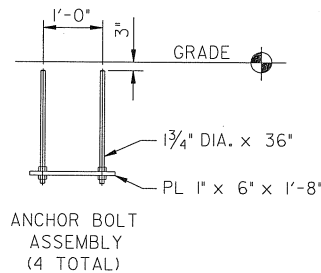
MODULAR POLE 'J' - 35' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-555
REVISED 2001



ANCHOR BOLT SETTING PLAN



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PROFILE

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

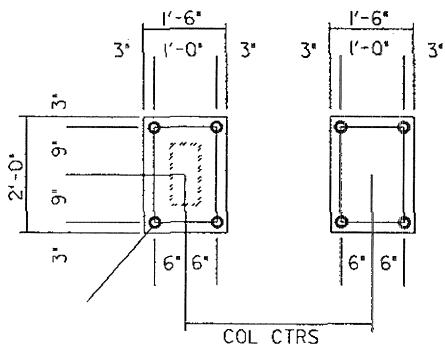
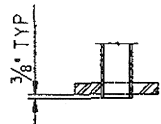


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

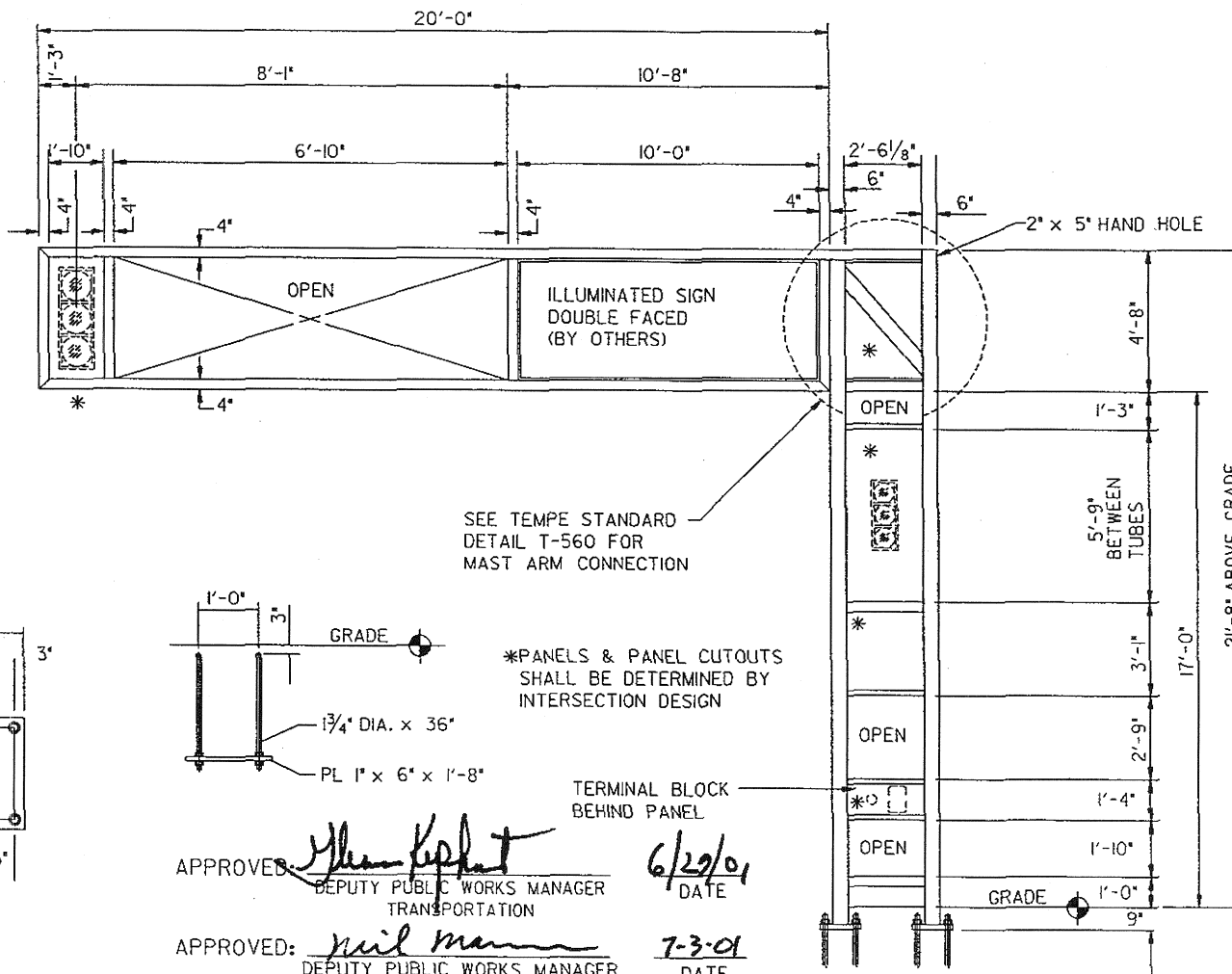
MODULAR POLE 'F' - 20' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-556
REVISED 2001



ANCHOR BOLT SETTING PLAN



APPROVED: *[Signature]* 6/29/01
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION
DATE

APPROVED: *[Signature]* 7-3-01
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER
DATE

PROFILE

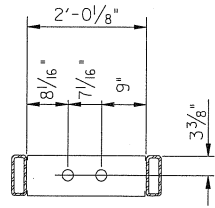


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

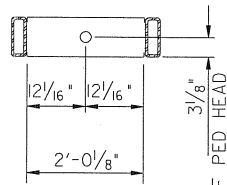
MODULAR POLE 'E' - 20' MAST ARM

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-557
REVISED 2001

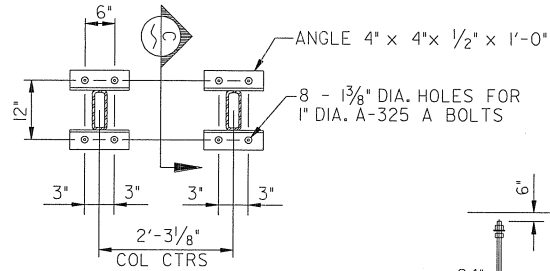


SECTION A

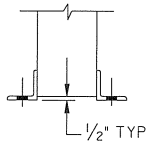


SECTION B

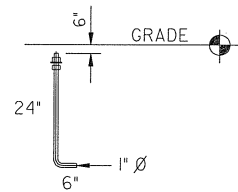
* PANELS & PANEL CUTOUTS SHALL BE DETERMINED BY INTERSECTION DESIGN



ANCHOR BOLT SETTING PLAN

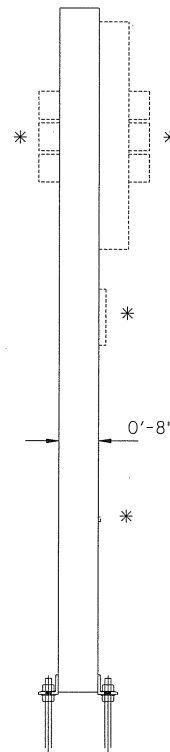
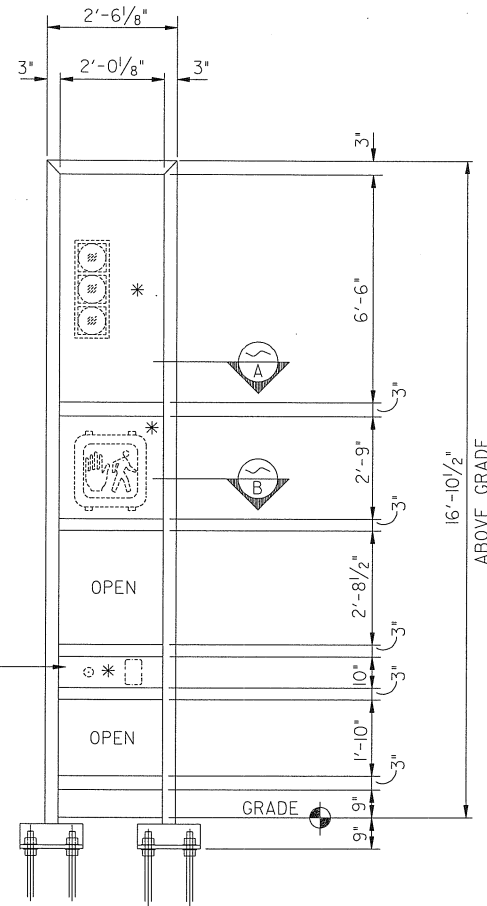


TYP SECTION C



ANCHOR BOLT WITH NUTS & WASHERS (8 TOTAL)

TERMINAL BLOCK BEHIND PANEL



PROFILE

ORIGINAL SIGNATURE ON FILE AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

DATE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

DATE

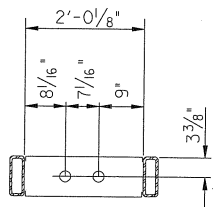


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

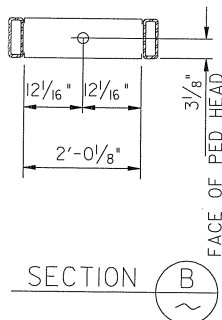
MODULAR POLE 'A-I'

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-558
REVISED 2001

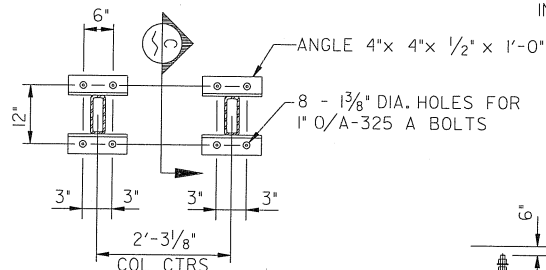


SECTION A

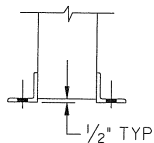
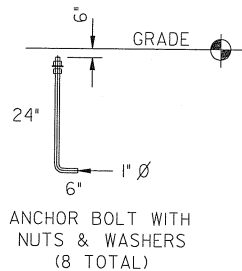


SECTION B

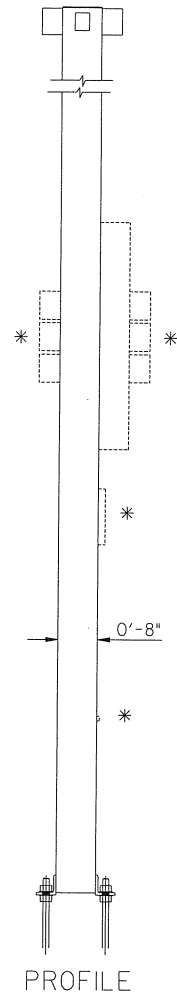
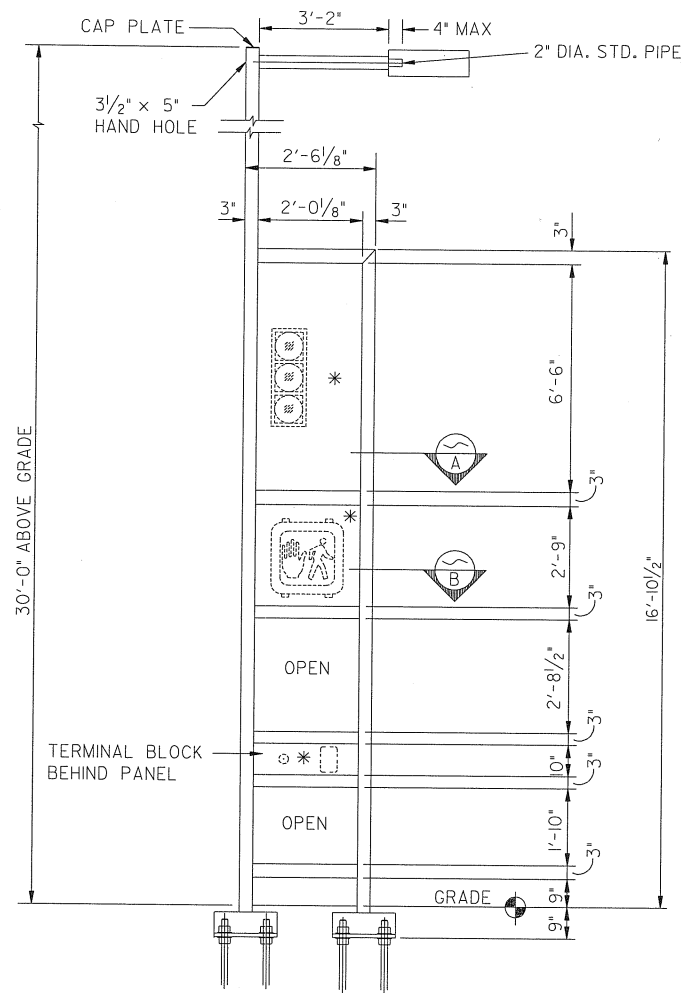
*PANELS & PANEL CUTOUTS SHALL BE DETERMINED BY INTERSECTION DESIGN



ANCHOR BOLT SETTING PLAN



TYP. SECTION C



PROFILE

APPROVED: ORIGINAL SIGNATURE ON FILE AT THE CITY OF TEMPE DATE
 DEPUTY PUBLIC WORKS MANAGER
 TRANSPORTATION

APPROVED: _____ DATE
 DEPUTY PUBLIC WORKS MANAGER
 CITY ENGINEER

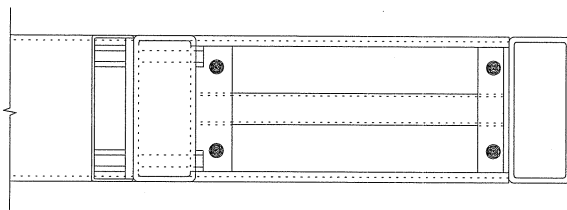


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

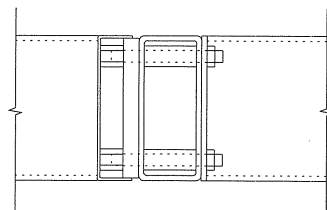
MODULAR POLE 'A-2'

ASSEMBLY DRAWING ONLY
 SPECS AND DESIGN BY
 T.A. CAID INDUSTRIES, INC
 TUCSON, AZ

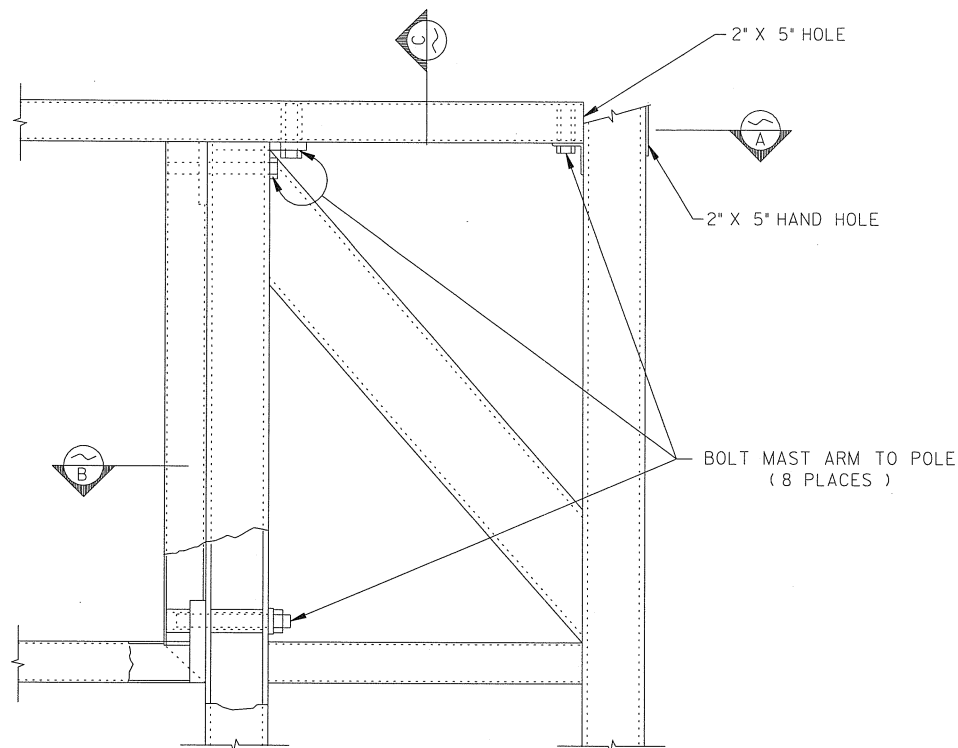
DETAIL T-559
 REVISED 2001



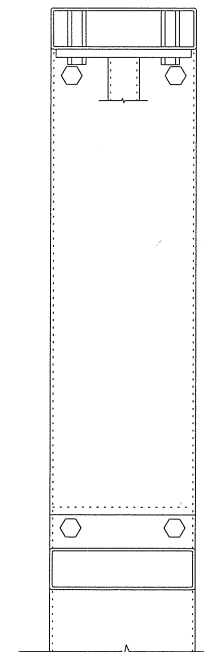
SECTION A



SECTION B



MAST ARM CONNECTION DETAIL



SECTION C

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

DATE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

DATE



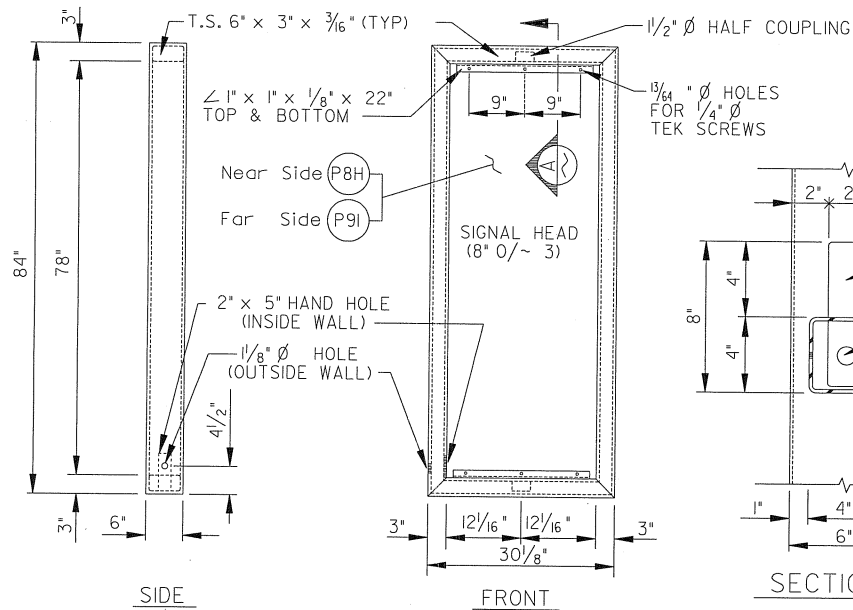
CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

MODULAR POLE MAST ARM CONNECTION

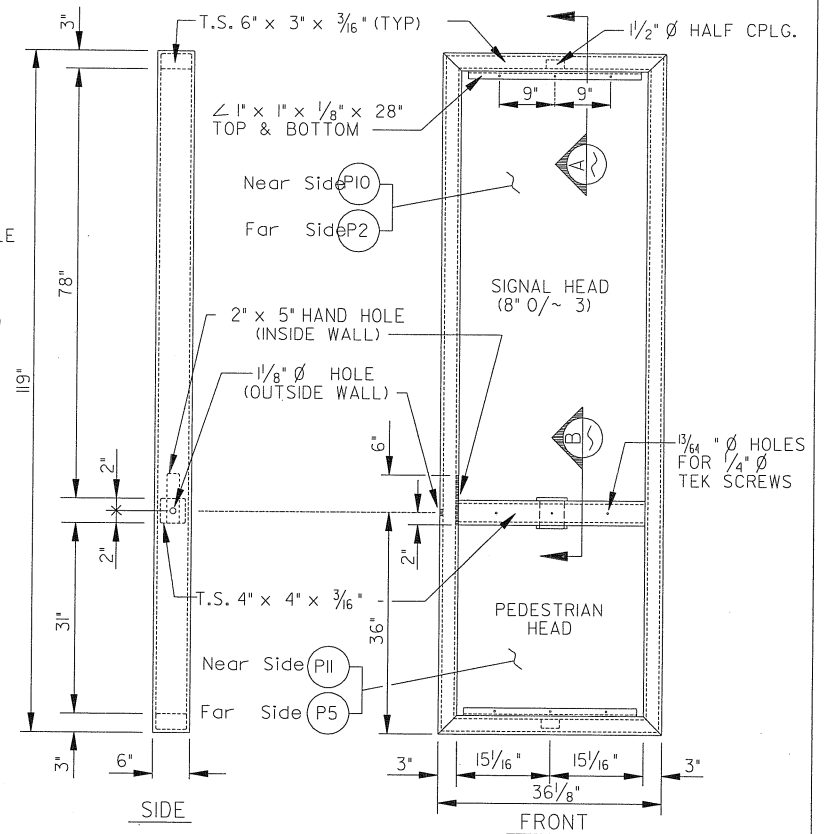
ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-560

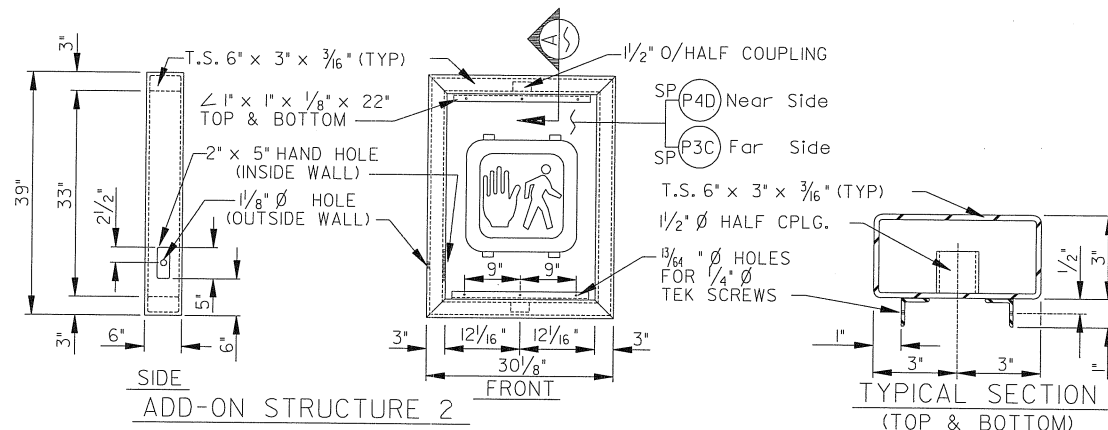
REVISED 2001



SIDE FRONT
ADD-ON STRUCTURE 1



SIDE FRONT
ADD-ON STRUCTURE 3



SIDE FRONT
ADD-ON STRUCTURE 2

TYPICAL SECTION (TOP & BOTTOM)

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

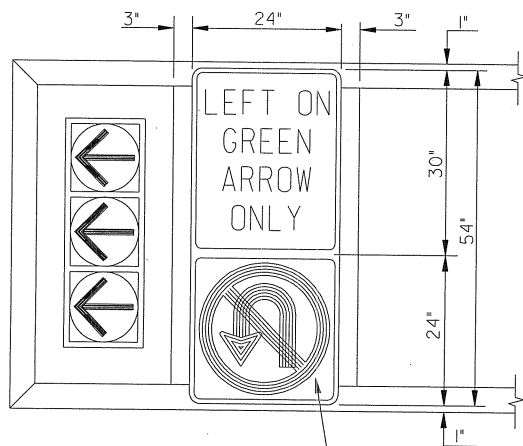


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

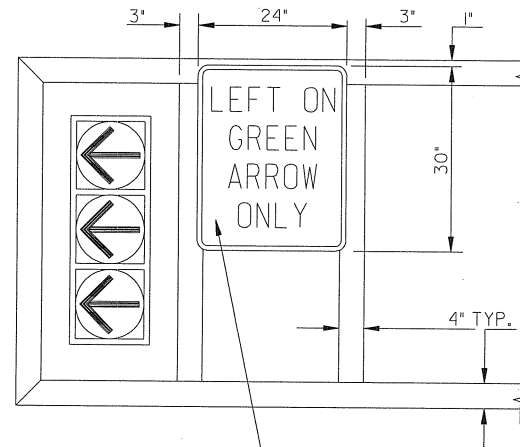
MODULAR SIGNAL ADD-ON STRUCTURES

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

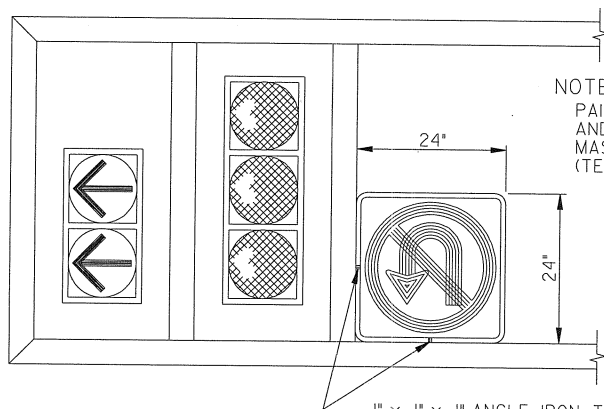
DETAIL T-561
REVISED 2001



MOUNT DUAL SIGN ON SINGLE UNIT, CENTER OVER BLANK PANEL ON SIGNAL MAST ARM

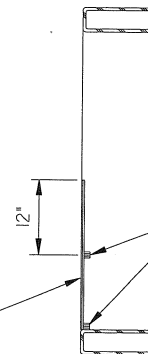


MOUNT SINGLE SIGN, CENTER OVER BLANK PANEL ON SIGNAL MAST ARM



NOTE:
PAINT BACK SIDES OF SIGN
AND ANGLE IRON TO MATCH
MAST ARM COLOR.
(TEMPE BRONZE)

1" x 1" x 1" ANGLE IRON TABS WELDED TO MAST ARM FOR SIGN MOUNTING. (SIGN FACE TO BE FLUSH WITH APPROACH SIDE OF MAST ARM)

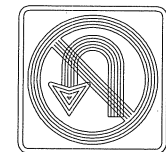


SIGN FACE

SECTION



R10-5z



R3-4

APPROVED: ORIGINAL SIGNATURE ON FILE AT THE CITY OF TEMPE DATE

DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: DATE

DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER



CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

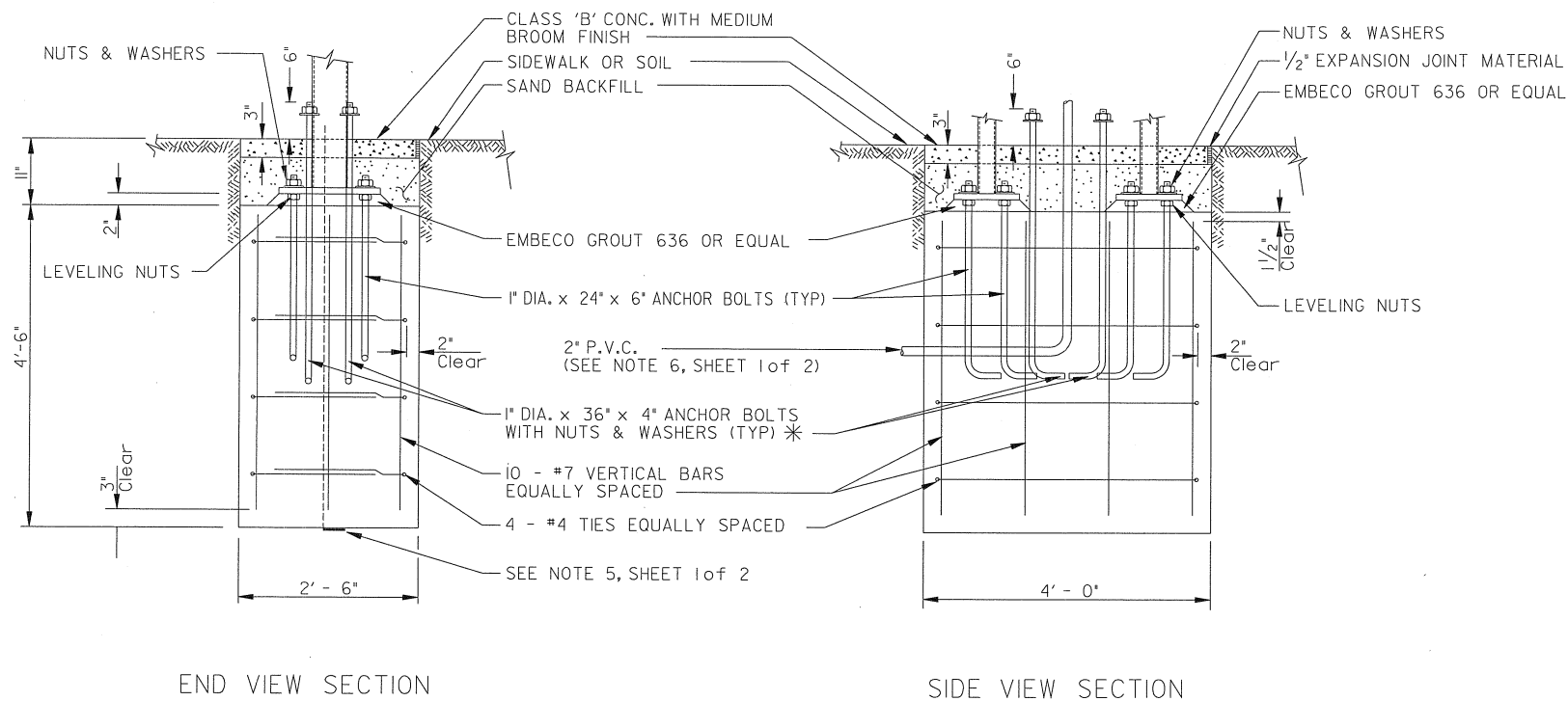
MODULAR SIGNAL MAST ARM SIGN
MOUNTING STANDARDS

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-562
REVISED 2001



DETAIL T-570
SHEET 1 OF 2
REVISED 2001



* BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

APPROVED: ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE DATE

DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE

DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

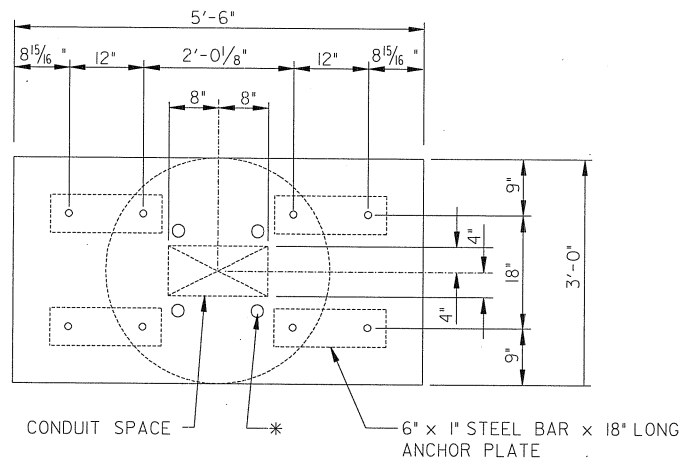


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

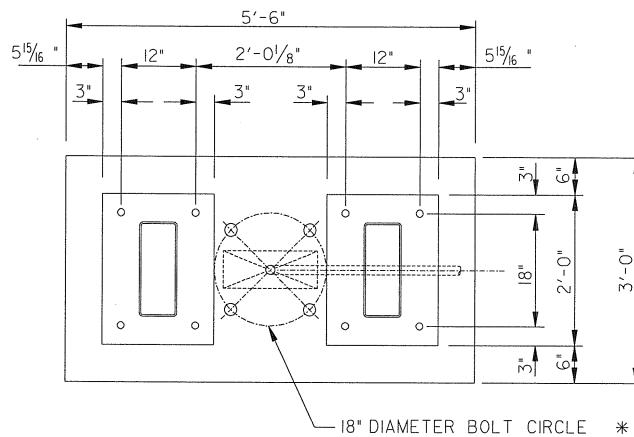
TRAFFIC SIGNAL FOUNDATION DETAIL
FOUNDATION FOR TYPE "A" MOD. (NO MAST ARM)

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-570
SHEET 2 OF 2
REVISED 2001



ANCHOR BOLT LAYOUT PLAN



BASE PLATE LAYOUT PLAN

GENERAL NOTES

1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS, SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/ SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. AT 28 DAYS.
4. REBAR GRADE 60.
5. EMBEDDED PLATES - A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED.
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

*BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

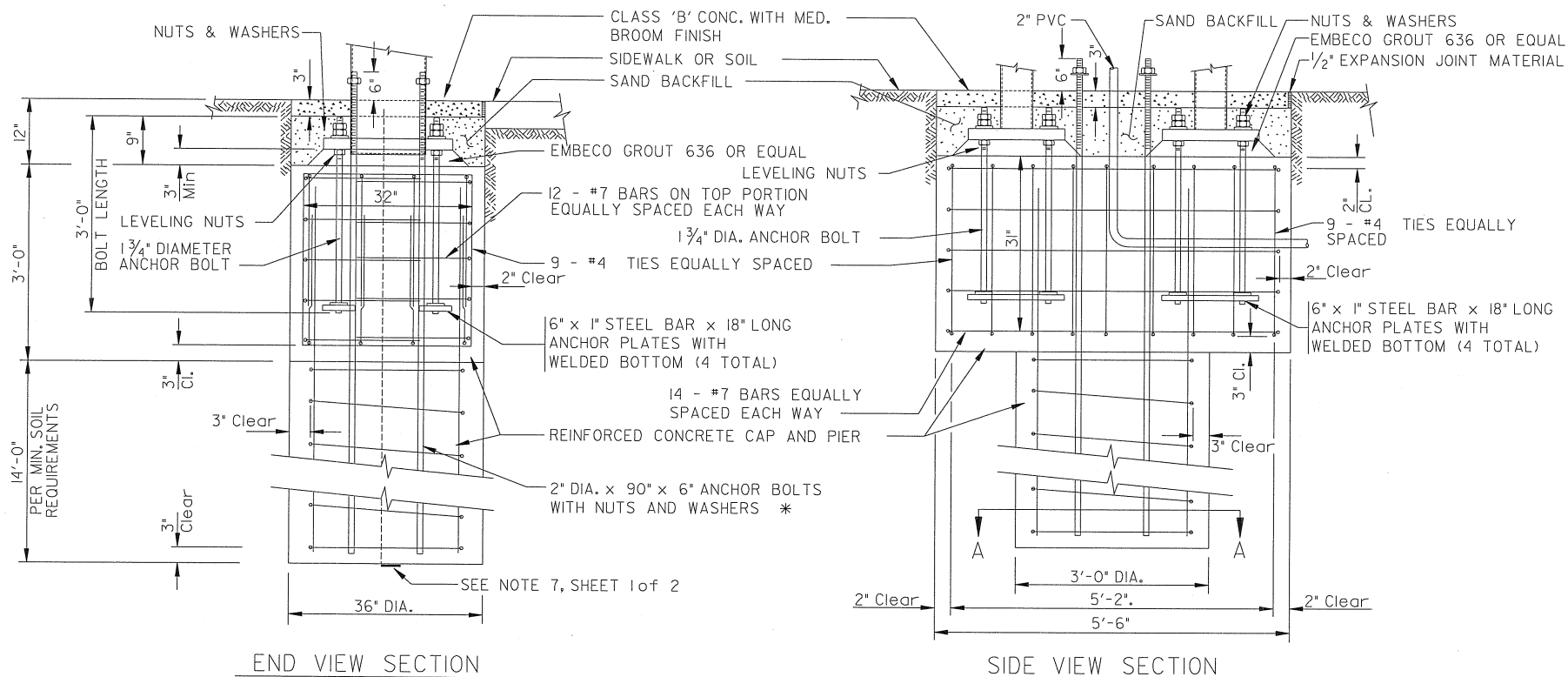


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL FOUNDATION DETAIL
FOR MODULAR 20,35, 40
MAST ARM STRUCTURES

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-57I
SHEET 1 OF 2
REVISED 2001



* BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

2" DIA. x 90"x 6" ANCHOR BOLTS
WITH NUTS & WASHERS *

10 - #7 VERTICAL BARS (Typ)

3/8" SMOOTH SPIRAL TIE WITH 8" PITCH

SECTION A - A

APPROVED: ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE DATE

DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE

DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

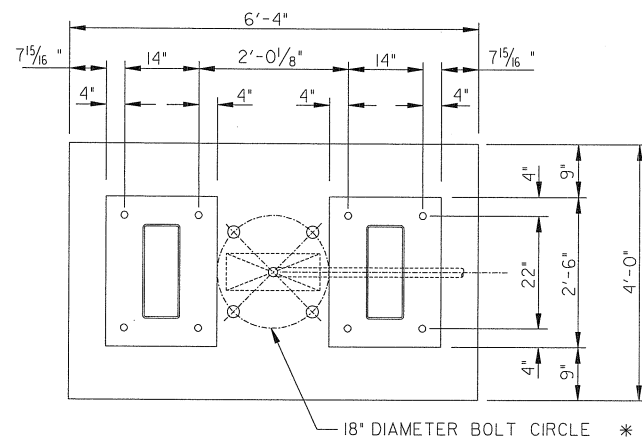
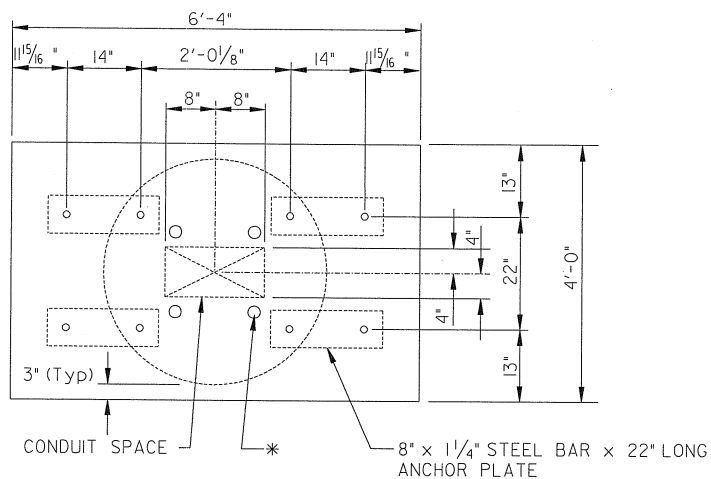


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL FOUNDATION DETAIL
FOR MODULAR 20,35,40
MAST ARM STRUCTURES

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-57I
SHEET 2 OF 2
REVISED 2001



*BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

GENERAL NOTES

- MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS. SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/SQ. FT. PER FOOT OF DEPTH.
- EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
- CONCRETE 4000 P.S.I. AT 28 DAYS.
- REBAR GRADE 60.
- EMBEDDED PLATES - A-36.
- ANCHOR BOLTS - A-36 FULLY GALVANIZED.
- A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

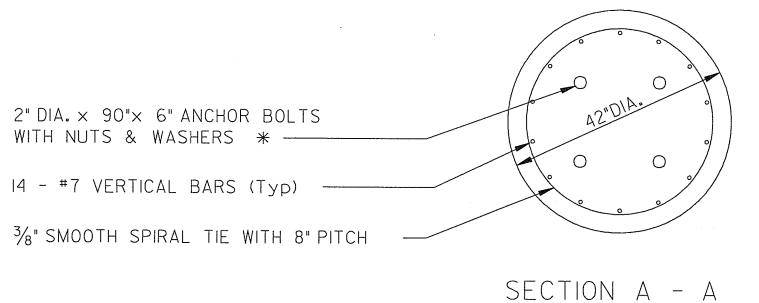
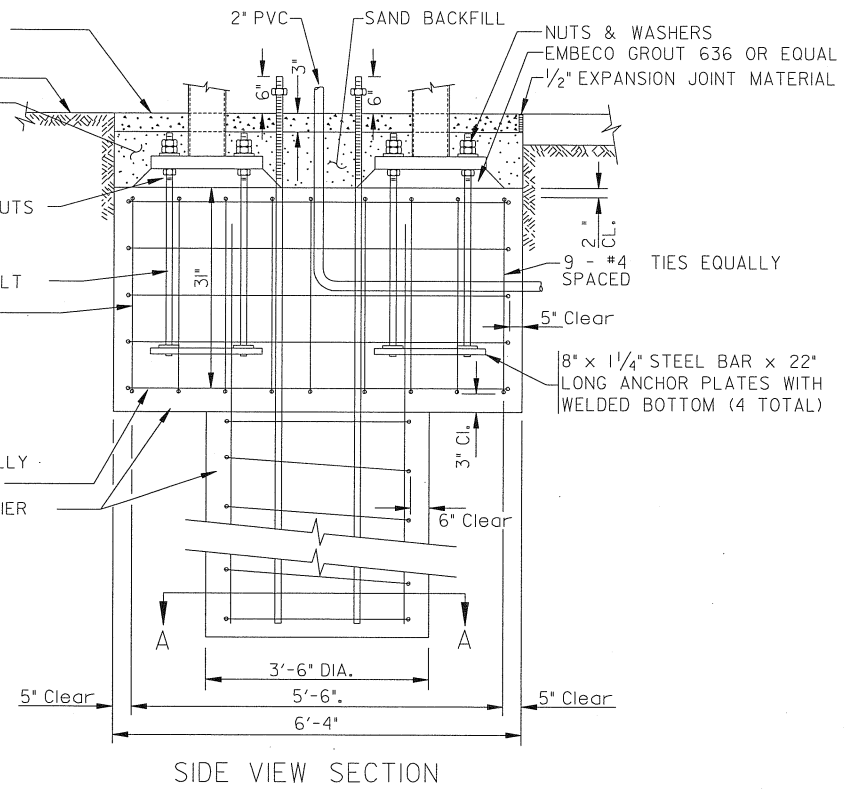
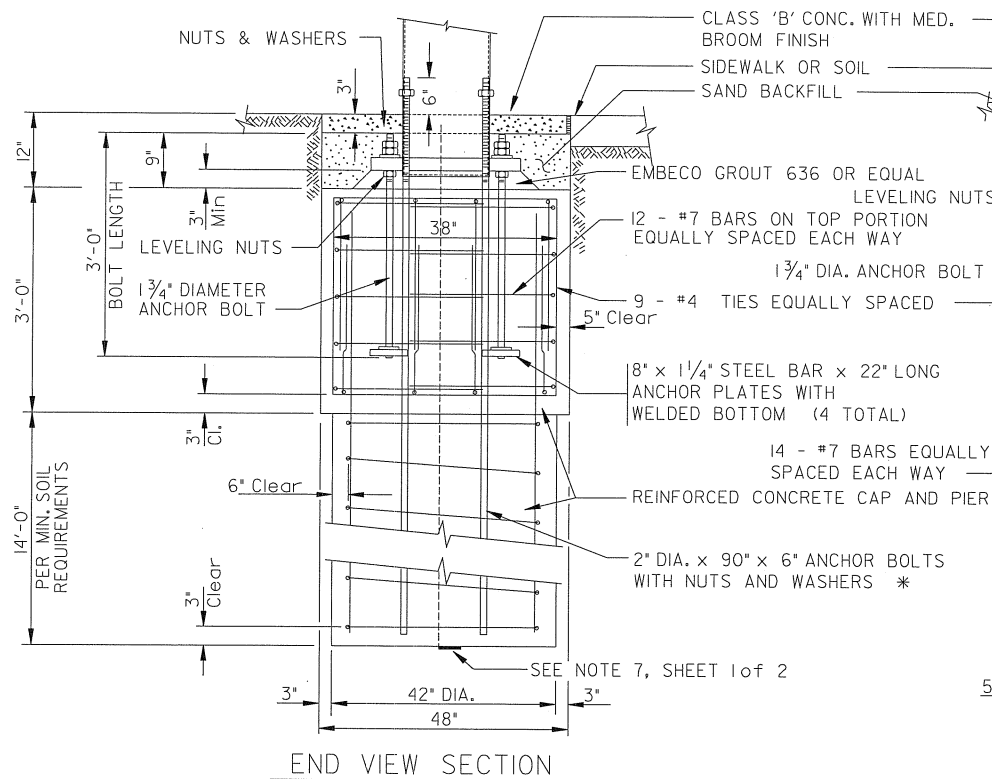


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL FOUNDATION DETAIL
FOR MODULAR 45 MAST ARM STRUCTURE

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-572
SHEET 1 OF 2
REVISED 2001



* BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
TRANSPORTATION
DATE _____

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER
DATE _____

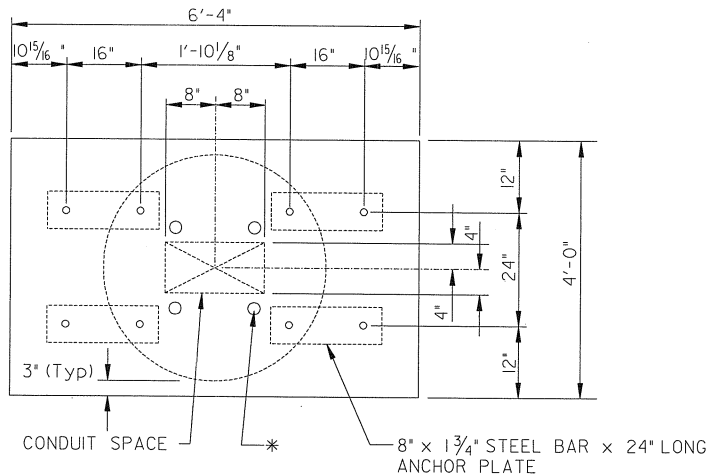


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

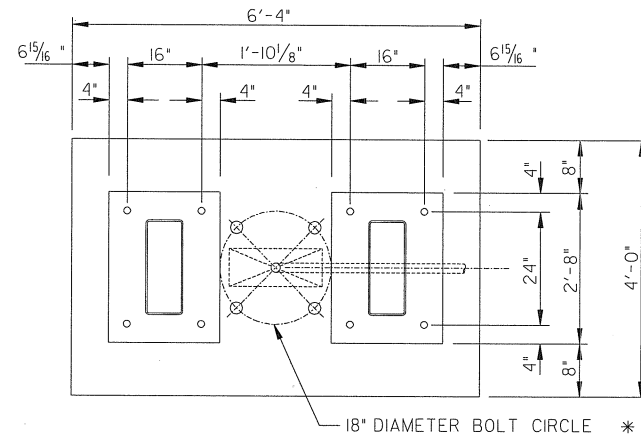
TRAFFIC SIGNAL FOUNDATION DETAIL
FOR MODULAR 45 MAST ARM STRUCTURE

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-572
SHEET 2 OF 2
REVISED 2001



ANCHOR BOLT LAYOUT PLAN



BASE PLATE LAYOUT PLAN

GENERAL NOTES

1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS.
SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. AT 28 DAYS.
4. REBAR GRADE 60.
5. EMBEDDED PLATES - A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED.
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

*BOLTS FOR INTERIM SIGNAL ERECTION
MAY BE DELETED AT ENGINEER'S DIRECTION.

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER

APPROVED: _____ DATE _____
DEPUTY PUBLIC WORKS MANAGER
CITY ENGINEER

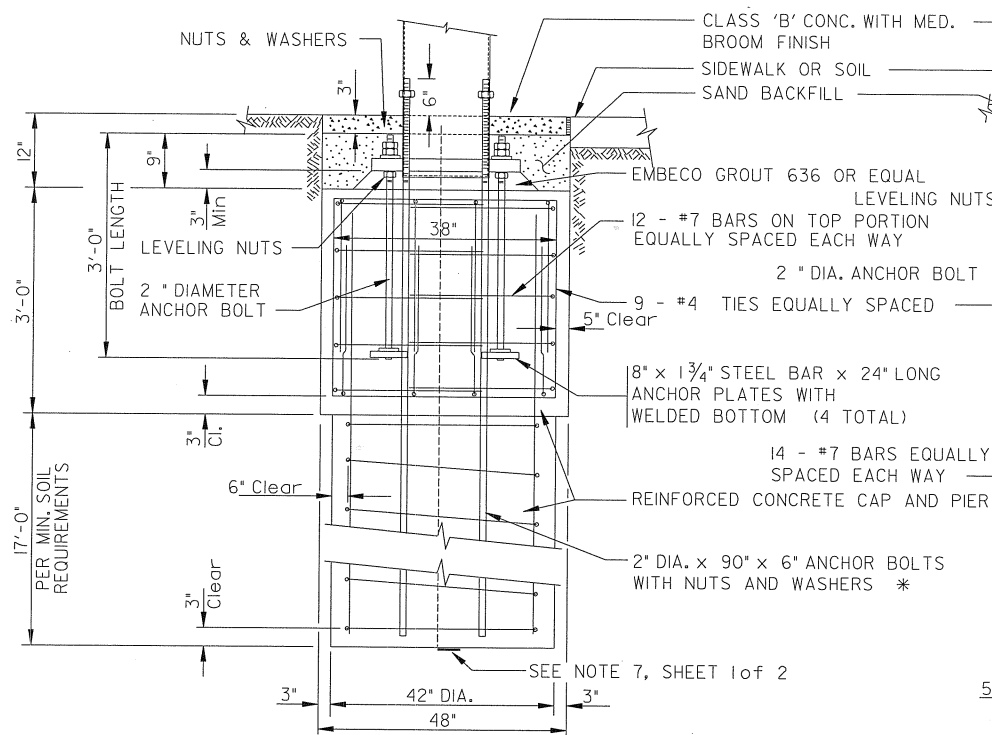


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

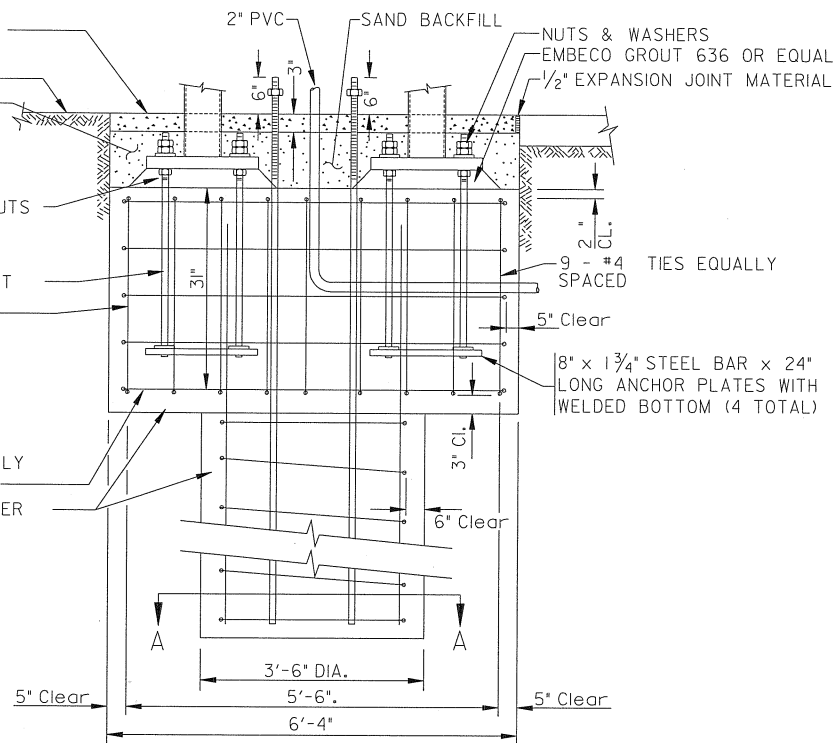
TRAFFIC SIGNAL FOUNDATION DETAIL
FOR MODULAR 50 MAST ARM STRUCTURE

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

DETAIL T-573
SHEET 1 OF 2
DRAWN 2004



END VIEW SECTION



SIDE VIEW SECTION

2" DIA. x 90" x 6" ANCHOR BOLTS WITH NUTS & WASHERS *

14 - #7 VERTICAL BARS (Typ)

3/8" SMOOTH SPIRAL TIE WITH 8" PITCH

SECTION A - A

* BOLTS FOR INTERIM SIGNAL ERECTION MAY BE DELETED AT ENGINEER'S DIRECTION.

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER DATE

APPROVED: _____
DEPUTY PUBLIC WORKS MANAGER CITY ENGINEER DATE

ORIGINAL SIGNATURE ON FILE AT THE CITY OF TEMPE

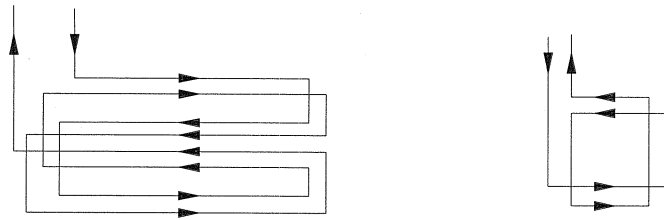


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

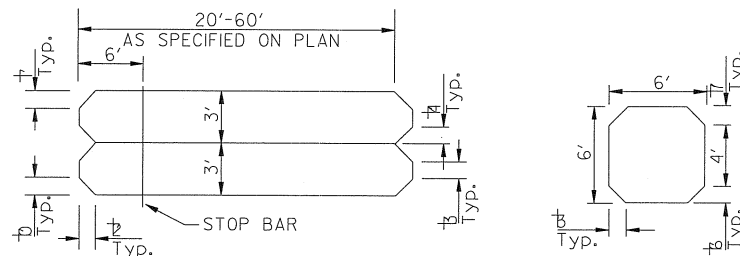
TRAFFIC SIGNAL FOUNDATION DETAIL
FOR MODULAR 50 MAST ARM STRUCTURE

ASSEMBLY DRAWING ONLY
SPECS AND DESIGN BY
T.A. CAID INDUSTRIES, INC
TUCSON, AZ

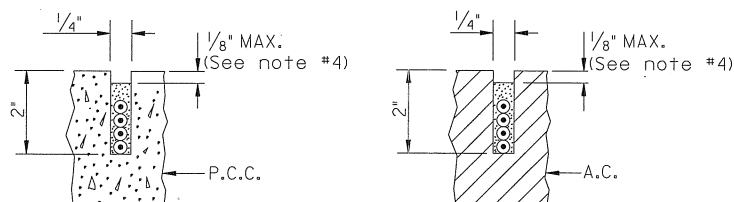
DETAIL T-573
SHEET 2 OF 2
DRAWN 2004



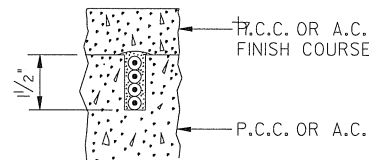
WIRING DIAGRAM FOR OCCUPANCY LOOP DETECTOR
LOOP DUCT (ORANGE)



OCCUPANCY LOOP DETECTOR SAW CUT PATTERN



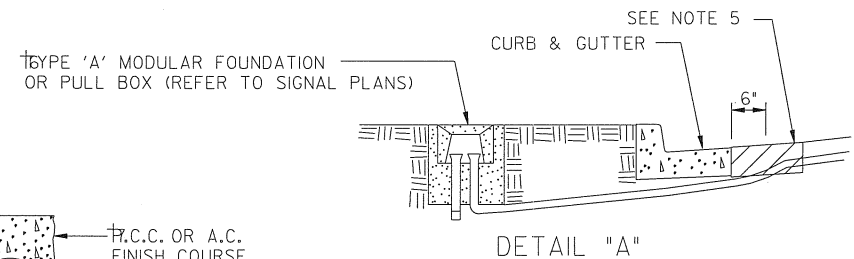
LOOPS IN FINISH COURSE



LOOPS IN SUB-BASE

NOTES:

1. BUT THE DIAGONALS AS SHOWN TO PREVENT SHARP BENDS IN THE WIRE. OVERCUT THE DIAGONALS SO THAT THE CORNERS HAVE THE FULL DEPTH REQUIRED.
2. THE SAW CUT SHALL BE AS SHOWN UNLESS OTHERWISE NOTED.
3. BLOW OUT ALL SAW CUTS BEFORE INSERTING THE WIRES. WIRES SHALL BE INSERTED IN SUCH A MANNER THAT THE INSULATION SHALL NOT BE DAMAGED.
4. SAW CUTS SHALL BE FILLED WITH EPOXY LOOP SEALANT, OR EQUIVALENT SEALANT AS APPROVED BY CITY ENGINEER.
5. USE SAME MATERIAL (OR APPROVED EQUAL) FOR PATCHING EXISTING PAVEMENT. PATCH TO AT LEAST 1/4" HIGHER THAN SURFACE OF EXISTING PAVEMENT.
6. ALL DETECTOR LOOPS SHALL BE GIVEN A CONTINUITY AND INSULATION TEST BEFORE AND AFTER PLACING THE FINAL PAVING OR PLACING THE SEALER IN THE SAW CUTS.
7. LOOP DETECTORS SHALL BE LOCATED IN CENTER OF TRAVELED LANE UNLESS OTHERWISE NOTED ON PLANS AND SHALL BE APPROVED PRIOR TO SAW CUTTING.
8. LEFT-TURN LANE DETECTOR LEAD-IN SHALL BE INSTALLED IN A SEPARATE SAW CUT.
9. NO MORE THAN TWO ADJACENT DETECTOR LEAD-INS SHALL BE IN THE SAME SAW CUT.
10. DETECTOR LEAD-IN SAW CUTS SHALL BE 1' APART.



ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS DIRECTOR DATE

APPROVED: _____
CITY ENGINEER DATE

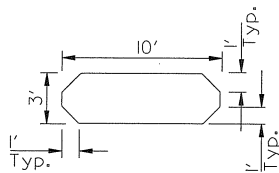


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

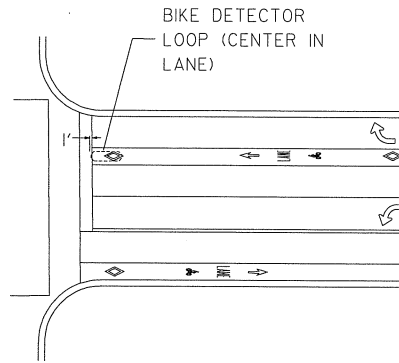
TRAFFIC LOOP DETECTOR DETAIL

DETAIL T-575
REVISED 1998

WIRING DIAGRAM FOR
OCCUPANCY LOOP DETECTOR
LOOP DUCT (ORANGE)



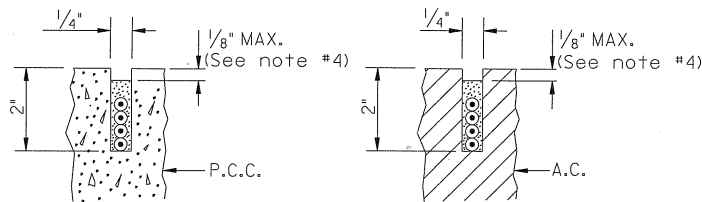
OCCUPANCY LOOP DETECTOR
SAW CUT PATTERN



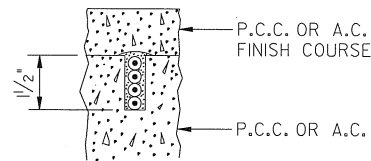
LOCATION MAP FOR
LOOP DETECTOR

NOTES:

- 1) CUT THE DIAGONALS AS SHOWN TO PREVENT SHARP BENDS IN THE WIRE. OVERCUT THE DIAGONALS SO THAT THE CORNERS HAVE THE FULL DEPTH REQUIRED.
- 2) THE SAW CUT SHALL BE AS SHOWN UNLESS OTHERWISE NOTED.
- 3) BLOW OUT ALL SAW CUTS BEFORE INSERTING THE WIRES. INSULATION SHALL BE INSERTED IN SUCH A MANNER THAT INSULATION SHALL NOT BE DAMAGED.
- 4) SAW CUTS SHALL BE FILLED WITH EPOXY LOOP SEALANT, OR EQUIVALENT SEALANT AS APPROVED BY CITY ENGINEER.
- 5) USE SAME MATERIAL (OR APPROVED EQUAL) FOR PATCHING EXISTING PAVEMENT. PATCH TO AT LEAST 1/4" HIGHER THAN SURFACE OF EXISTING PAVEMENT.
- 6) ALL DETECTOR LOOPS SHALL BE GIVEN A CONTINUITY AND INSULATION TEST BEFORE AND AFTER PLACING THE FINAL PAVING OR PLACING THE SEALER IN THE SAW CUTS.
- 7) LOOP DETECTORS SHALL BE LOCATED IN CENTER OF TRAVELED BIKE LANE UNLESS OTHERWISE NOTED ON PLANS AND SHALL BE APPROVED PRIOR TO SAW CUTTING.
- 8) DETECTOR LEAD-IN SAW CUTS SHALL BE 1' APART. THE FULL DEPTH REQUIRED.
9. INSTALL LOOP DETECTORS IN ADVANCE OF STOP BAR AND CROSSWALK.



LOOPS IN FINISH COURSE

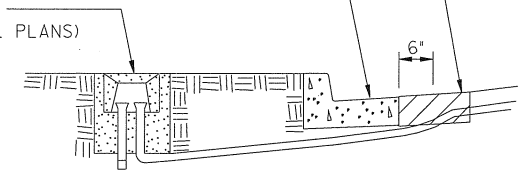


LOOPS IN SUB-BASE

TYPE 'A' MODULAR FOUNDATION
OR PULL BOX (REFER TO SIGNAL PLANS)

CURB & GUTTER

SEE NOTE 5



DETAIL "A"

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS DIRECTOR DATE

APPROVED: _____
CITY ENGINEER DATE

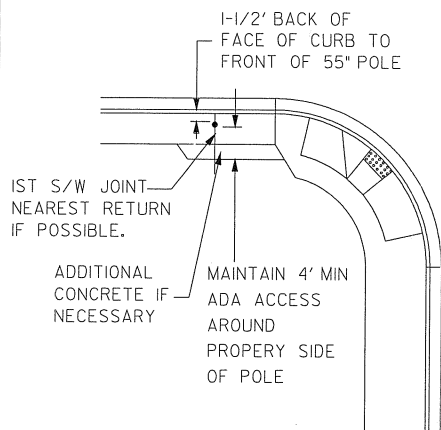


CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

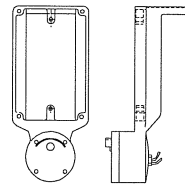
BICYCLE LOOP DETECTOR DETAIL

DETAIL T-576

REVISED 2000

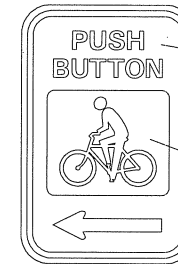


LOCATION MAP



TRAFFIC PARTS, INC., MODEL B-10
POST TOP MOUNT OR EQUIVALENT

PUSH BUTTON BODY



WHITE
BACKGROUND

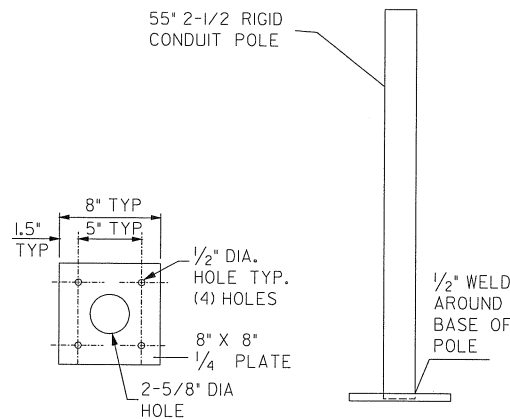
BLACK
BACKGROUND

WHITE BICYCLIST & BICYCLE ON BLACK BACKGROUND.
BLACK TEXT AND BORDER. SIZE 6" X 9" WHITE ENGINEER
GRADE REFLECTIVE SHEETING.

BIKE PUSH BUTTON SIGN

NOTES:

1. EXISTING CONDITIONS MAY REQUIRE MODIFICATION OF THE ABOVE ALTERNATES WITH APPROVAL OF THE CITY ENGINEER.
2. IF NECESSARY, ADD ADDITIONAL CONCRETE TO SIDEWALK ADJACENT TO POLE AS NEEDED TO MAINTAIN 4' ACCESS.
3. SECURE BASE AND 55" POLE TO CONCRETE WITH (4) $\frac{3}{8}$ " ANCHOR BOLTS.
4. INSTALL 55" POLES AT 1ST SIDEWALK JOINT BEYOND RETURN IF POSSIBLE.



55" POLE AND BOTTOM PLATE

ORIGINAL SIGNATURE ON FILE
AT THE CITY OF TEMPE

APPROVED: _____
DEPUTY PUBLIC WORKS DIRECTOR DATE

APPROVED: _____
CITY ENGINEER DATE



CITY OF TEMPE
PUBLIC WORKS DEPARTMENT

BICYCLE PUSH BUTTON AND POLE DETAIL

DETAIL T-577

1999

TRAFFIC ENGINEERING STRIPING PLAN GENERAL NOTES

THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC STRIPING

1. All pavement markings shall conform to the Arizona Department of Transportation Standard Drawings and Specifications unless otherwise specified in the Manual on Uniform Traffic Control Devices (2003 Edition), or as noted on the plans.
2. The CONTRACTOR shall spot mark the entire project before applying any paint. When the spotting is complete the CONTRACTOR shall contact the Traffic Engineering Section at 480-503-6186, to make arrangements for inspection prior to applying any paint (3 business days advance notice is required). The permanent marking plans may be modified as directed by the ENGINEER. The CONTRACTOR shall refer any questions concerning pavement markings to the Town of Gilbert Traffic Engineering Section
3. Any pavement markings applied prior to field inspection by the Town of Gilbert Traffic Engineering Section shall be removed and re-striped at the CONTRACTOR'S expense.
4. All no passing zones shown are subject to change in the field by the ENGINEER. As a result, striping quantities could vary.

DETAIL NO. 300A	TOWN OF GILBERT STANDARD DETAIL	STRIPING GENERAL NOTES	REVISED	DETAIL NO. 300A
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TRAFFIC ENGINEERING STRIPING PLAN GENERAL NOTES

THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC STRIPING

1. **All striping will be applied initially in paint (to include all items specified to be applied in MIPPT).** The CONTRACTOR will be required to re-stripe the entire project 30 to 45 days after initial striping. **At this time** all symbols, transverse markings, and holding bars will be re-striped using a Melt-In-Place Preformed Thermoplastic Tape (manufactured by Zumar Industries, INC. or an approved equal), and the remainder of the project in paint.
2. Raised pavement markers shall be installed on the new pavement. They shall be installed per ADOT Standard Detail No. 4-M-2.02 and 4-M-2.03.1. They shall be non-adhesive with an abrasive resistant surface. They shall be secured to the pavement with a hot, flexible marker adhesive. All markers shall be installed so that the reflective face of each marker is facing the direction of traffic and is perpendicular to the direction of traffic flow.
3. Where raised pavement markers are placed along solid striping, the nearest edge of each marker shall be offset no less than 4 inches and no more than 6 inches from the nearest edge of the striping.

Turn lane arrows shall be installed per ADOT Standard Detail 4-M-1.16 with the exception of the word marking "ONLY" **which will not be used.**

TRAFFIC ENGINEERING STRIPING PLAN GENERAL NOTES

THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC STRIPING

1. The dimensions shown to pavement stripes are to the center of the stripe or, in the case of a double stripe, to the center of the double stripe.
2. All permanent pavement lines parallel to the flow of traffic shall be installed at a minimum thickness of 15 mills and shall be placed in accordance with the Arizona Department of Transportation Section 708 - Permanent Pavement Markings.
3. All striping shall be a minimum width of 4 inches except where noted on the plans, or as noted below:
 - All edge lines shall be 6" in width
 - All holding bars shall be 8" in width
 - All crosswalk lines shall be 12" in width
 - All STOP bars shall be 18" in width
4. The pavement marking dimensions on any given set of plans may be schematic and not to scale, therefore the contractor shall follow all standard details that are noted on the plans when installing pavement markings.
5. When striping obliteration is necessary, it shall be accomplished by water blasting (other methods may be allowed with prior approval of the Towns Traffic Engineer). A sealant approved by the Town of Gilberts Traffic Engineer shall be provided and applied by the contractor to all areas of pavement marking obliteration. Applying paint over striping **DOES NOT** constitute stripe obliteration. **Striping obliteration may go beyond project limits so that the new striping will match existing. The Town of Gilberts traffic engineer may require the contractor to adjust signing and striping as necessary.**

DETAIL NO.
300C

TOWN OF GILBERT
STANDARD DETAIL

STRIPING GENERAL NOTES

REVISED

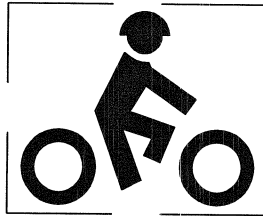
DETAIL NO.
300C

TRAFFIC ENGINEERING STRIPING PLAN GENERAL NOTES

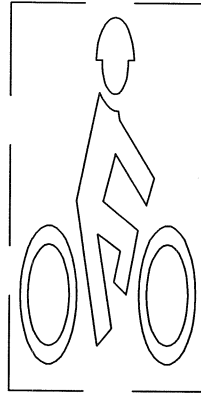
THE FOLLOWING NOTES ARE TO BE INCLUDED ON ALL PLANS SUBMITTED TO THE TOWN OF GILBERT THAT WILL REQUIRE TRAFFIC STRIPING

1. Median ends shall be marked in accordance with the MCDOT Striping Manual Details 4-17 and 4-18.
2. If necessary for smooth traffic flow, the CONTRACTOR may be required to add additional asphalt to accommodate traffic. The CONTRACTOR or DEVELOPER will be required to complete this at their expense.
3. Should field conditions change due to construction on adjacent pieces of roadway, the CONTRACTOR shall be responsible for notifying the Town of Gilbert Traffic Engineer at 480-503-6186 and will be required to submit for review, an updated striping plan 21 days prior to paving. The CONTRACTOR may be required to re-stripe, stripe, and design striping for adjacent portions of roadway that are affected by their construction. Any changes, additions, or deletions will be accomplished by the CONTRACTOR at their expense.
4. All signing and striping shall be installed within 5 days of completion of the final lift of asphalt or as required by the Engineer.
5. The general contractor or sub-contractor installing pavement markings within the Towns right-of-way are required to obtain a permit **PRIOR** to any installation. Permit applications can be obtained from Development Services located at 90 E. Civic Center Dr, Gilbert, AZ 85296, or by calling 480-503-6700.

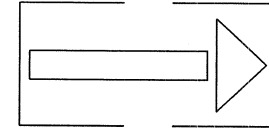
DETAIL NO. 300D	TOWN OF GILBERT STANDARD DETAIL	STRIPING GENERAL NOTES	REVISED	DETAIL NO. 300D
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TRAIL



BIKE LANE

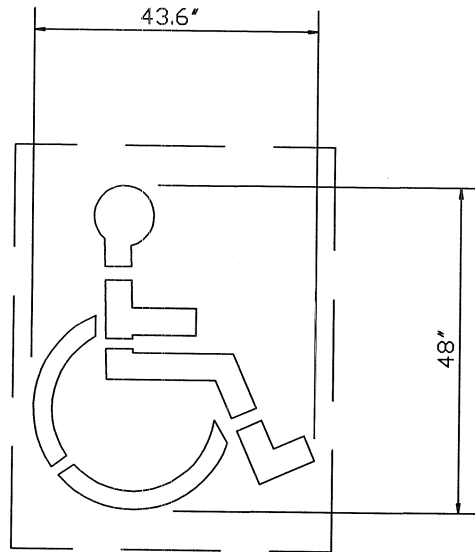


BIKE LANE ARROW

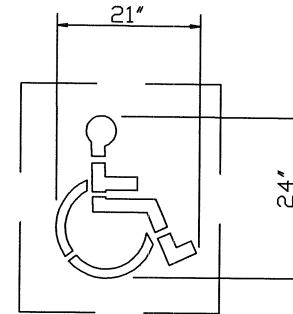
BIKE PAVEMENT MARKING STENCILS			
LEGEND OR IMAGE	IMAGE WIDTH & HEIGHT	STENCIL SIZE (SPRAY PAINT)	STENCIL SIZE (HOT PLASTIC)
STRAIGHT ARROW	60" X 21"		
BIKE TRAIL SYMBOL	52" X 42"	56" X 44"	60" X 48"
BIKE LANE SYMBOL	36" X 72"	44" X 86"	48" X 90"

* SEE BIKE LANE LAYOUT DETAIL

DETAIL NO. 301A	TOWN OF GILBERT STANDARD DETAIL	BIKE PAVEMENT MARKING STENCILS	REVISED	DETAIL NO. 301A
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S-48H
HANDICAP PARKING SYMBOL



S-224H
HANDICAP PARKING SYMBOL

PAVEMENT MARKING STENCILS				
NO.	IMAGE	IMAGE WIDTH & HEIGHT	STENCIL SIZE (SPRAY PAINT)	STENCIL SIZE (HOT PLASTIC)
S-48HC	HANDICAP PARKING SYMBOL	43 1/2" X 48"	44" X 56"	48" X 60"
S-24HC	HANDICAP PARKING SYMBOL	21" X 24"	26" X 30"	30" X 34"

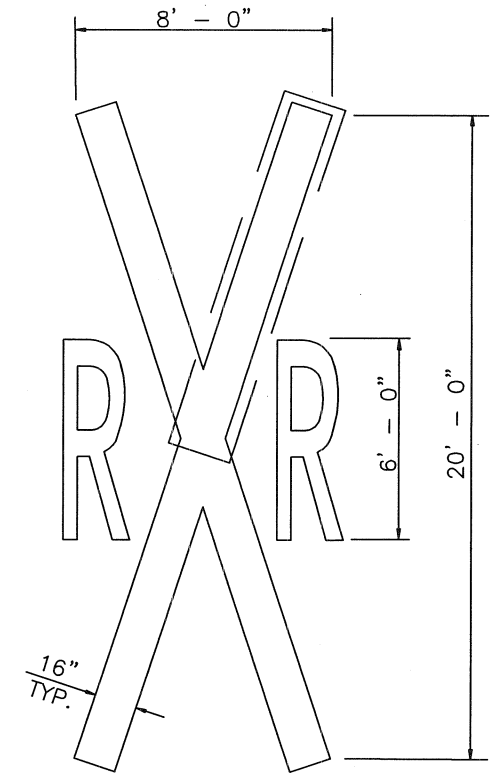
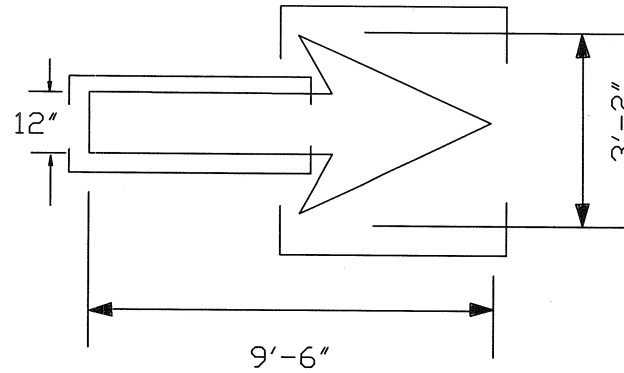
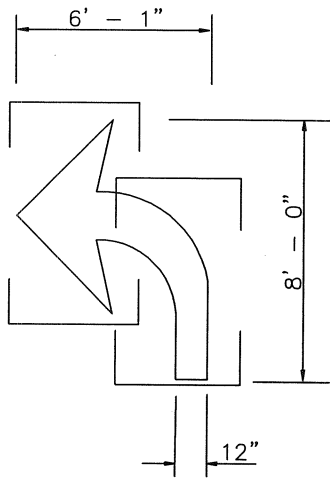
DETAIL NO.
301B

TOWN OF GILBERT
STANDARD DETAIL

HANDICAP PARKING
SYMBOLS

REVISED

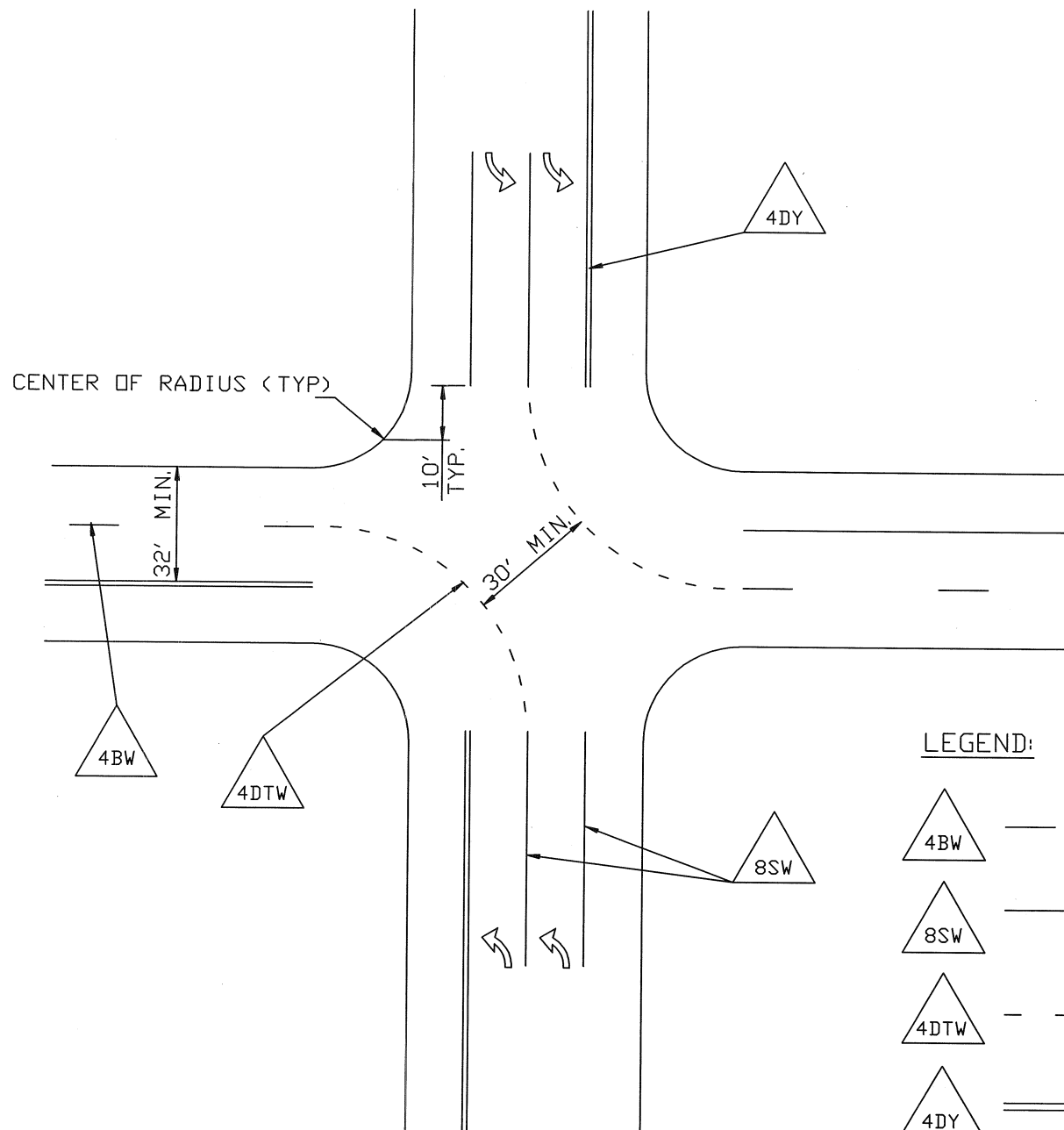
DETAIL NO.
301B











RAILROAD CROSSING SYMBOL

PAVEMENT MARKING STENCILS

IMAGE	IMAGE WIDTH & HEIGHT
TYPE IV (L OR R) CURVED ARROW HEAD	SEE ILLUSTRATION
TYPE IV (L OR R) CURVED ARROW SHAFT	SEE ILLUSTRATION
STRAIGHT ARROW HEAD (TOP)	SEE ILLUSTRATION
STRAIGHT ARROW SHAFT	SEE ILLUSTRATION
RAILROAD CROSSING SYMBOL	SEE ILLUSTRATION



LEGEND:

		4" BROKEN WHITE LINE WITH A 10' LINE SEGMENT AND A 30' GAP
		8" SOLID WHITE LINE
		4" DASHED WHITE LINE WITH A 2' LINE SEGMENT AND A 4' GAP
		4" DOUBLE SOLID YELLOW LINE

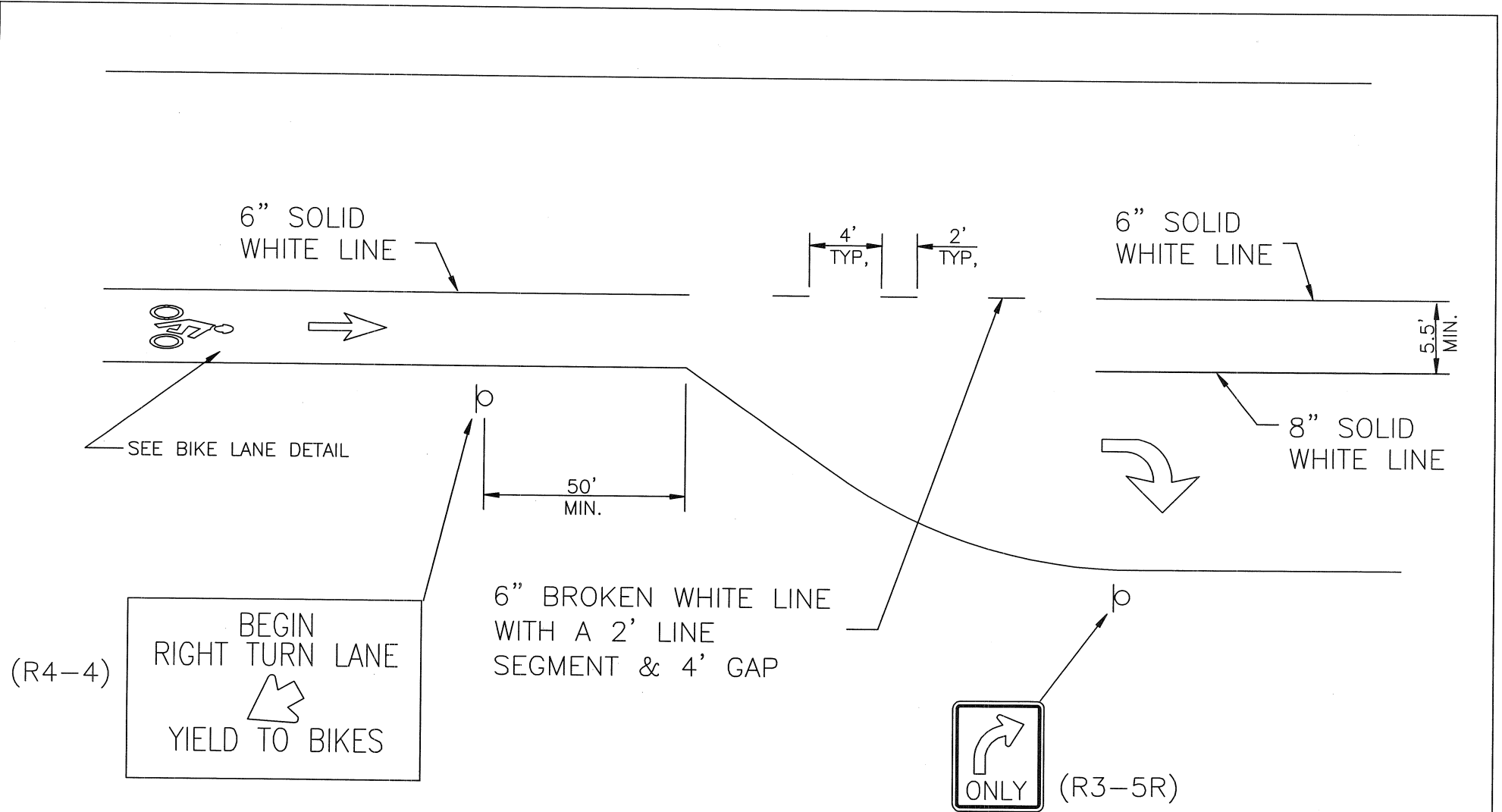
DETAIL NO.
302

TOWN OF GILBERT
STANDARD DETAIL

PAVEMENT MARKING EXTENSIONS
THROUGH INTERSECTIONS

REVISED

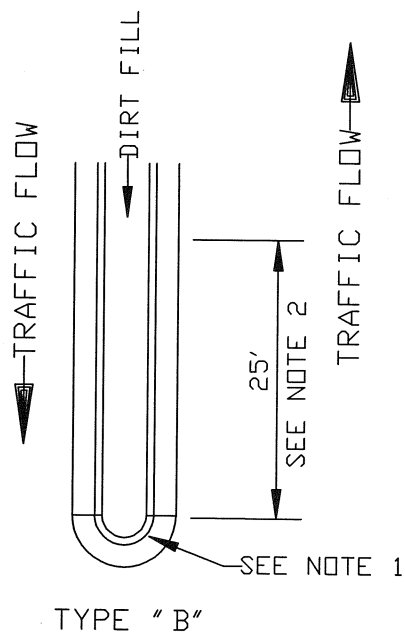
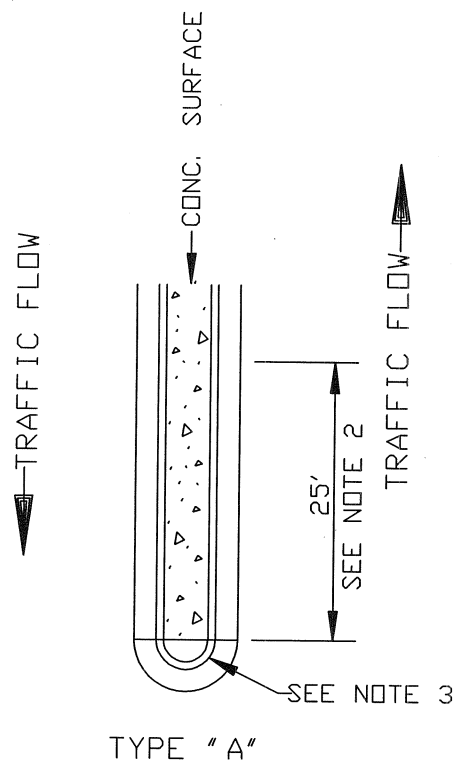
DETAIL NO.
302



NOTES:

1. ALL BICYCLE FACILITY SIGNS AND PAVEMENT MARKINGS SHALL BE REVIEWED AND APPROVED BY THE TOWN TRAFFIC ENGINEER OR HIS DESIGNATED REPRESENTATIVE PRIOR TO INSTALLATION.
2. PREFERENTIAL LANE SYMBOLS SHALL BE INSTALLED IMMEDIATELY AFTER EACH ROADWAY INTERSECTION PER TOWN OF GILBERT STANDARD DETAILS.

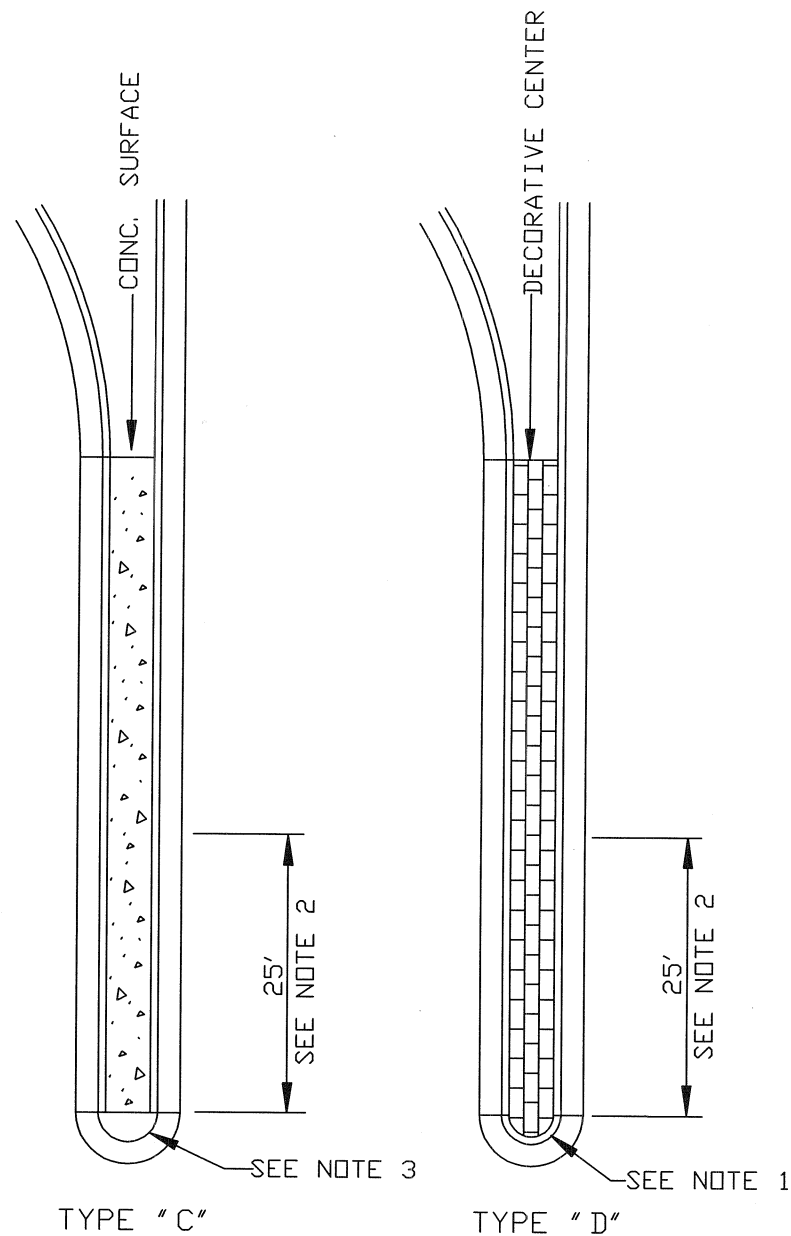
DETAIL NO. 303	TOWN OF GILBERT STANDARD DETAIL	BIKE LANE/RIGHT TURN LANE	REVISED	DETAIL NO. 303
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(FOR MEDIANS 6 FEET AND UNDER IN WIDTH)

NOTES:

1. PAINT TOP AND VERTICAL FACE OF CURB.
2. PAINT TOP AND VERTICAL FACE OF CURB FOR THE DISTANCE SHOWN.
3. PAINT VERTICAL FACE, TOP OF CURB AND TOP OF MEDIAN FROM THE NOSE OF THE MEDIAN BACK TO THE RADIUS OF THE NOSE SECTION.



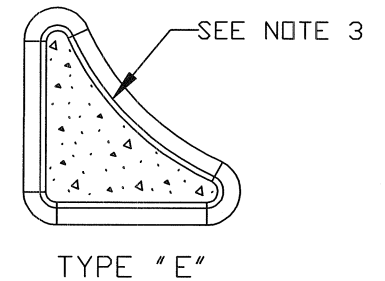
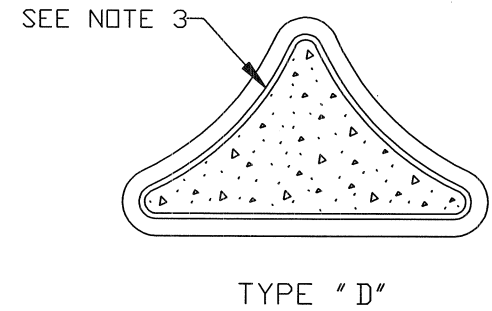
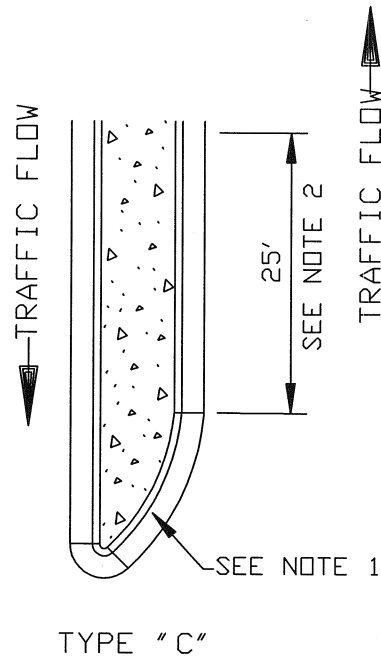
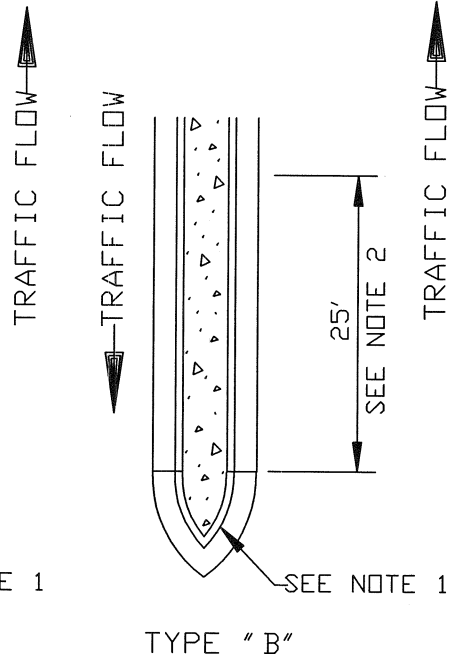
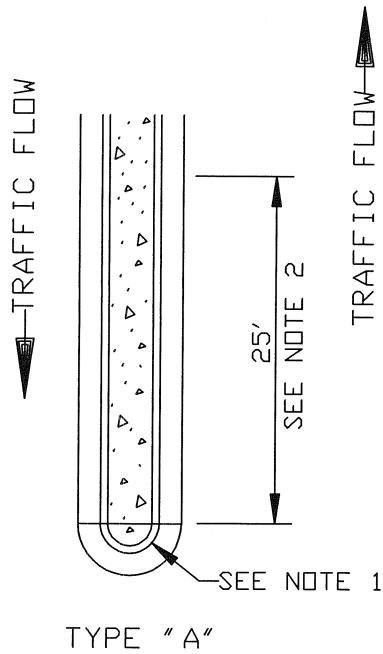
DETAIL NO.
304A

TOWN OF GILBERT
STANDARD DETAIL

CURB MARKINGS FOR RAISED
MEDIANS

REVISED

DETAIL NO.
304A



(FOR MEDIANS OVER 6 FEET IN WIDTH)

NOTES:

1. PAINT TOP AND VERTICAL FACE OF CURB.
2. PAINT TOP AND VERTICAL FACE OF CURB FOR THE DISTANCE SHOWN.
3. PAINT TOP AND VERTICAL FACE OF CURB WHITE ON ALL SIDES OF ISLAND FOR TYPE 'D' AND 'E'.

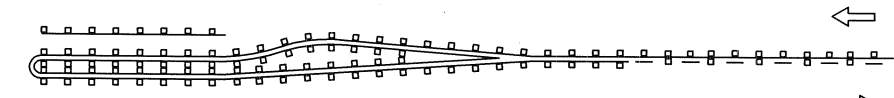
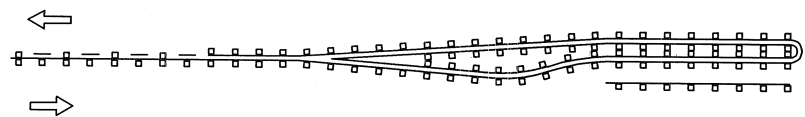
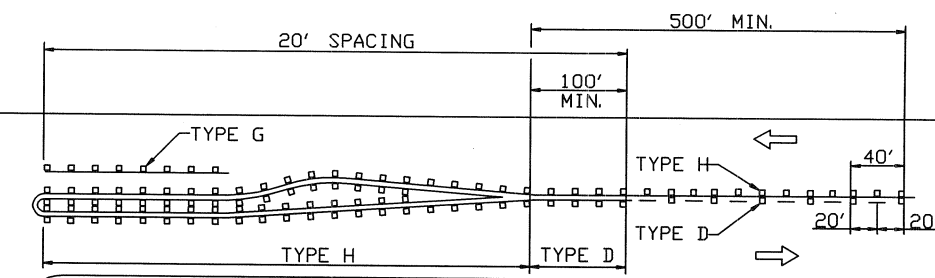
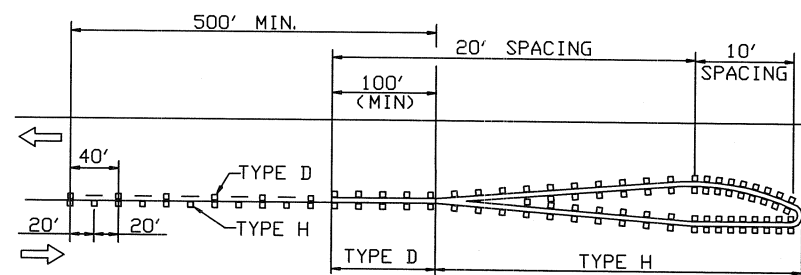
DETAIL NO.
304B

TOWN OF GILBERT
STANDARD DETAIL

CURB MARKINGS FOR RAISED
MEDIANS & ISLANDS

REVISED

DETAIL NO.
304B



SPACING AND MARKER TYPE AS SHOWN ABOVE

NOTES:

1. MARKERS ON REVERSE CURVE AND NOSE SHALL BE ORIENTED TOWARD APPROACHING HEADLIGHTS.
2. PAVEMENT MARKERS SHALL EXTEND 500' BEYOND END OF TAPER.
3. PLACE REFLECTIVE MARKERS MIDWAY BETWEEN BROKEN YELLOW CENTERLINE STRIPES.
4. PLACE TYPE G MARKERS WITH REFLECTIVE SIDE FACING TRAFFIC.
5. RAISED PAVEMENT MARKERS MAY BE INSTALLED TO SUPPLEMENT OR REPLACE PAINTED LINES ON THE APPROVAL OF THE TRAFFIC ENGINEER.

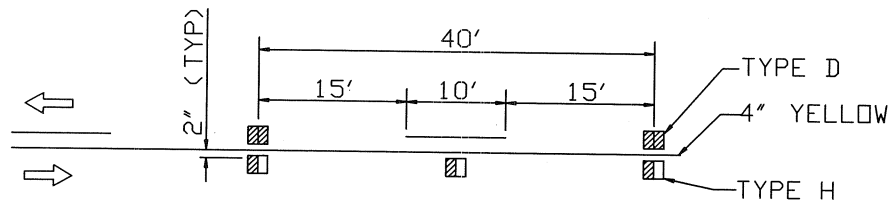
DETAIL NO.
305A

TOWN OF GILBERT
STANDARD DETAIL

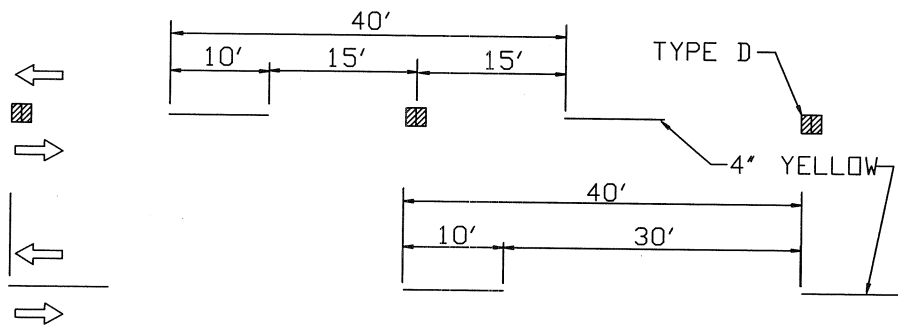
TYPICAL INSTALLATION OF
RAISED PAVEMENT MARKERS

REVISED

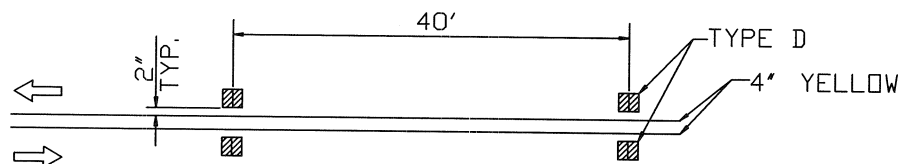
DETAIL NO.
305A



DOUBLE CENTER LINES
NO PASSING - ONE DIRECTION

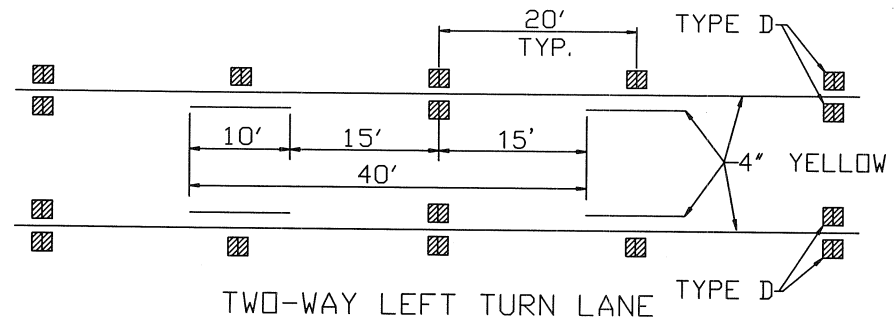


SINGLE CENTER LINE
PASSING ALLOWED - BOTH DIRECTIONS



DOUBLE CENTER LINE
NO PASSING - BOTH DIRECTIONS

CENTER LINES



TWO-WAY LEFT TURN LANE

RAISED PAVEMENT MARKER TYPES

LEGEND

TYPE A WHITE (NON-REFLECTIVE)	○
TYPE AYYELLOW (NON-REFLECTIVE)	●
TYPE C CLEAR/RED (REFLECTIVE)	□
TYPE D YELLOW, TWO-WAY (REFLECTIVE)	▨
TYPE G CLEAR, ONE-WAY (REFLECTIVE)	□
TYPE H YELLOW, ONE-WAY (REFLECTIVE)	▨
TYPE J WHITE, DAGMAR (REFLECTIVE)	○
TYPE JYYELLOW, DAGMAR (REFLECTIVE)	●
TYPE K WHITE, JIGGLE BARS	□
TYPE KY YELLOW, JIGGLE BARS	▨

NOTES:

1. RAISED PAVEMENT MARKERS SHALL NOT BE USED FOR RIGHT PAVEMENT EDGE LINE.
2. NORMALLY, RAISED PAVEMENT MARKERS FOR THE LEFT EDGE STRIPE SHOULD NOT BE USED.
3. EDGE LINES ARE NOT NORMALLY REQUIRED NEXT TO VERTICAL CURBS.
4. RAISED PAVEMENT MARKERS SHALL BE PLACED SO THAT THE REFLECTIVE FACE OF THE MARKER IS FACING AND PERPENDICULAR TO TRAFFIC.

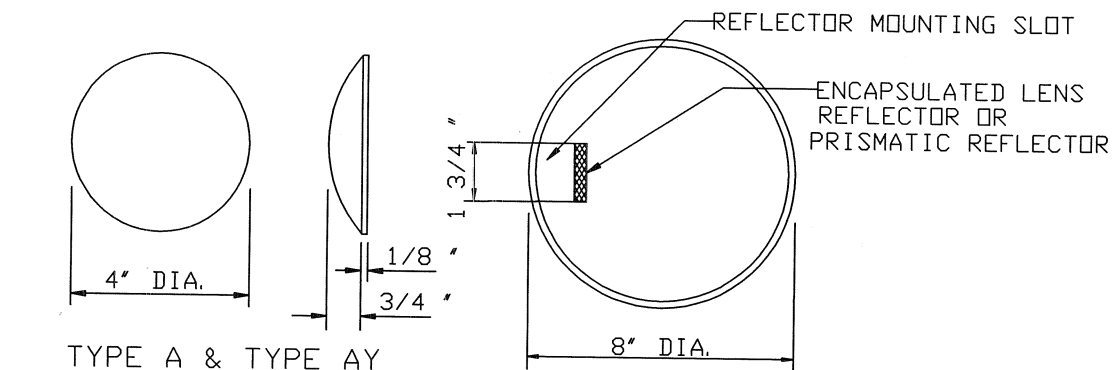
DETAIL NO.
305B

TOWN OF GILBERT
STANDARD DETAIL

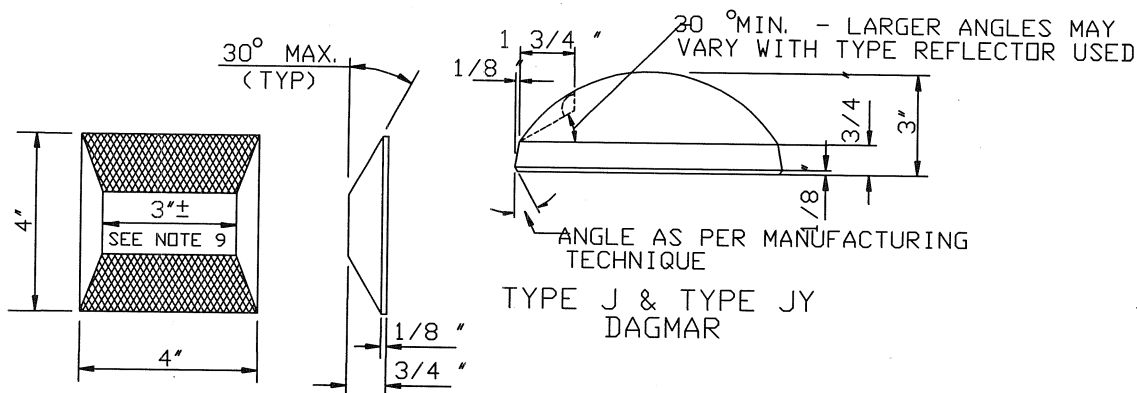
PAVEMENT MARKING DETAILS

REVISED

DETAIL NO.
305B

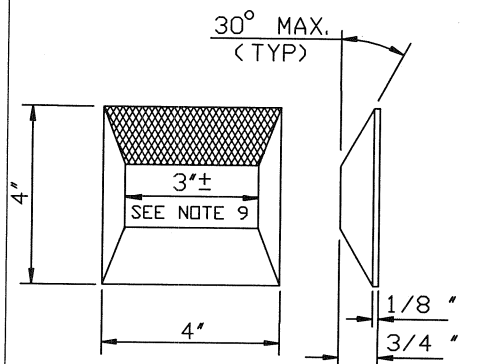


TYPE A & TYPE AY
RAISED PAVEMENT MARKER

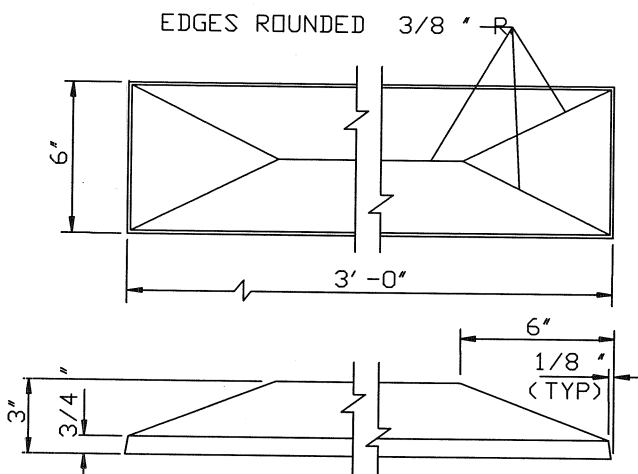


TYPE J & TYPE JY
DAGMAR

TYPE C & TYPE D
RAISED PAVEMENT MARKER



TYPE G & TYPE H
RAISED PAVEMENT MARKER



TYPE K & TYPE KY
JIGGLE BAR

NOTES:

1. TYPE A RAISED PAVEMENT MARKERS ARE WHITE AND NON-REFLECTIVE. TYPE AY RAISED PAVEMENT MARKERS ARE YELLOW AND NON-REFLECTIVE.
2. TYPE J DAGMARS ARE WHITE AND REFLECTORIZED. TYPE JY DAGMARS ARE YELLOW AND REFLECTORIZED. ENCAPSULATED LENS REFLECTORS SHALL BE USED FOR TYPE J AND JY DAGMARS. SUCH REFLECTORS SHALL NOT EXTEND BEYOND THE CROWN SURFACE.
3. TYPE A AND AY RAISED PAVEMENT MARKERS AND J AND JY DAGMARS CONSIST OF A HEAT-FIRED VITREOUS CERAMIC BASE AND A HEAT-FIRED, OPAQUE, GLAZED SURFACE.
4. THE FOLLOWING RAISED PAVEMENT MARKERS ARE REFLECTORIZED AND INTENDED FOR USE WITH TWO-WAY TRAFFIC:
COLOR --- TYPE D - YELLOW BOTH SIDES
5. THE FOLLOWING RAISED PAVEMENT MARKERS ARE REFLECTORIZED AND INTENDED FOR USE WITH ONE-WAY TRAFFIC:
COLOR
TYPE C - WHITE ONE SIDE, RED ONE SIDE
TYPE G - WHITE
TYPE H - YELLOW
6. TYPE C, D, G AND H RAISED PAVEMENT MARKERS SHALL CONSIST OF A PLASTIC SHELL FILLED WITH A MIXTURE OF AN ENERT THERMO SETTING COMPOUND AND FILLER MATERIALS. THE EXTERIOR SURFACE OF THE SHALL BE SMOOTH. THE SHELL SHALL CONTAIN ONE OR TWO PRISMATIC REFLECTOR FACES, AS REQUIRED, OF THE COLOR SPECIFIED.
7. TYPE K JIGGLE BARS ARE WHITE AND REFLECTORIZED. TYPE KY JIGGLE BARS ARE YELLOW AND REFLECTORIZED. JIGGLE BARS MAY CONSIST OF A HEAT-FIRED VITREOUS CERAMIC BASE OR A CLASS B CONCRETE MIX FOR MINOR STRUCTURES. THE COLOR OF JIGGLE BARS SHALL BE ACCOMPLISHED BY PAINTING ALL UPPER SURFACES WITH TRAFFIC PAINT. REFLECTORIZATION SHALL BE ACCOMPLISHED BY DROPPING GLASS BEADS INTO THE WET TRAFFIC PAINT. TRAFFIC PAINT, GLASS BEADS AND METHODS OF APPLICATION SHALL BE AS DESCRIBED IN THE CURRENT EDITION OF THE TOWN OF GILBERT'S TRAFFIC ENGINEERING SPECIFICATIONS.
8. ALL DIMENSIONS ARE NOMINAL, EXCEPT AS OTHERWISE NOTED.
9. THE REFLECTORIZED RAISED PAVEMENT MARKER ILLUSTRATED IS THE SQUARE SHOULDER TYPE. THE ROUND SHOULDER TYPE IS AN ACCEPTABLE ALTERNATE.

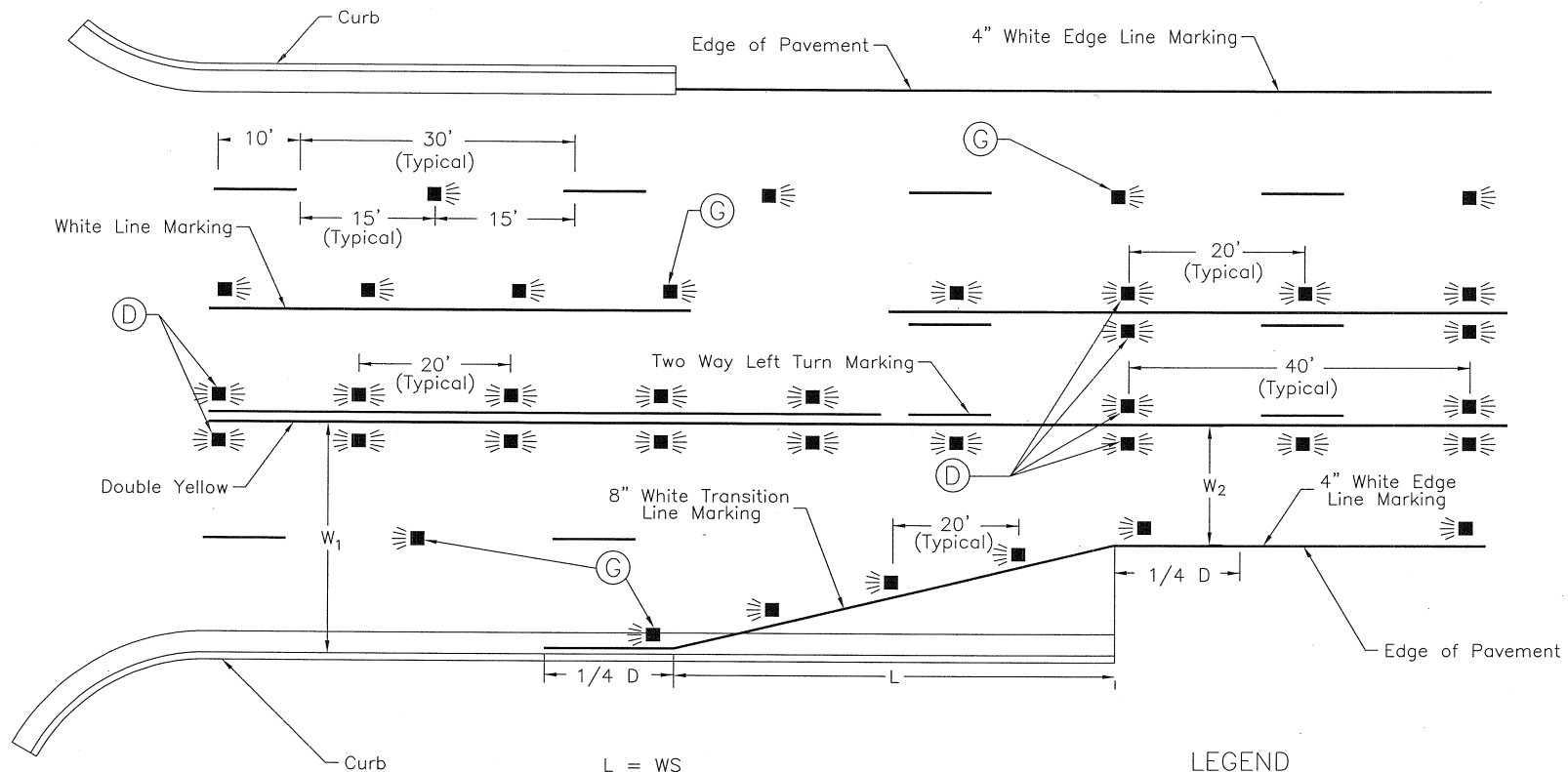
DETAIL NO.
306

TOWN OF GILBERT
STANDARD DETAIL

RAISED PAVEMENT
MARKER DETAILS

REVISED

DETAIL NO.
306



L = WS

D = 15S

W = $W_1 - W_2$

S = DESIGN SPEED OR
WHICH EVER IS
HIGHER

LEGEND

- (G) - TYPE "G" WHITE, ONE WAY REFLECTIVE
- (D) - TYPE "D" YELLOW, TWO WAY REFLECTIVE

SEE STANDARD DETAIL G-3212
FOR FIRE HYDRANT MARKERS

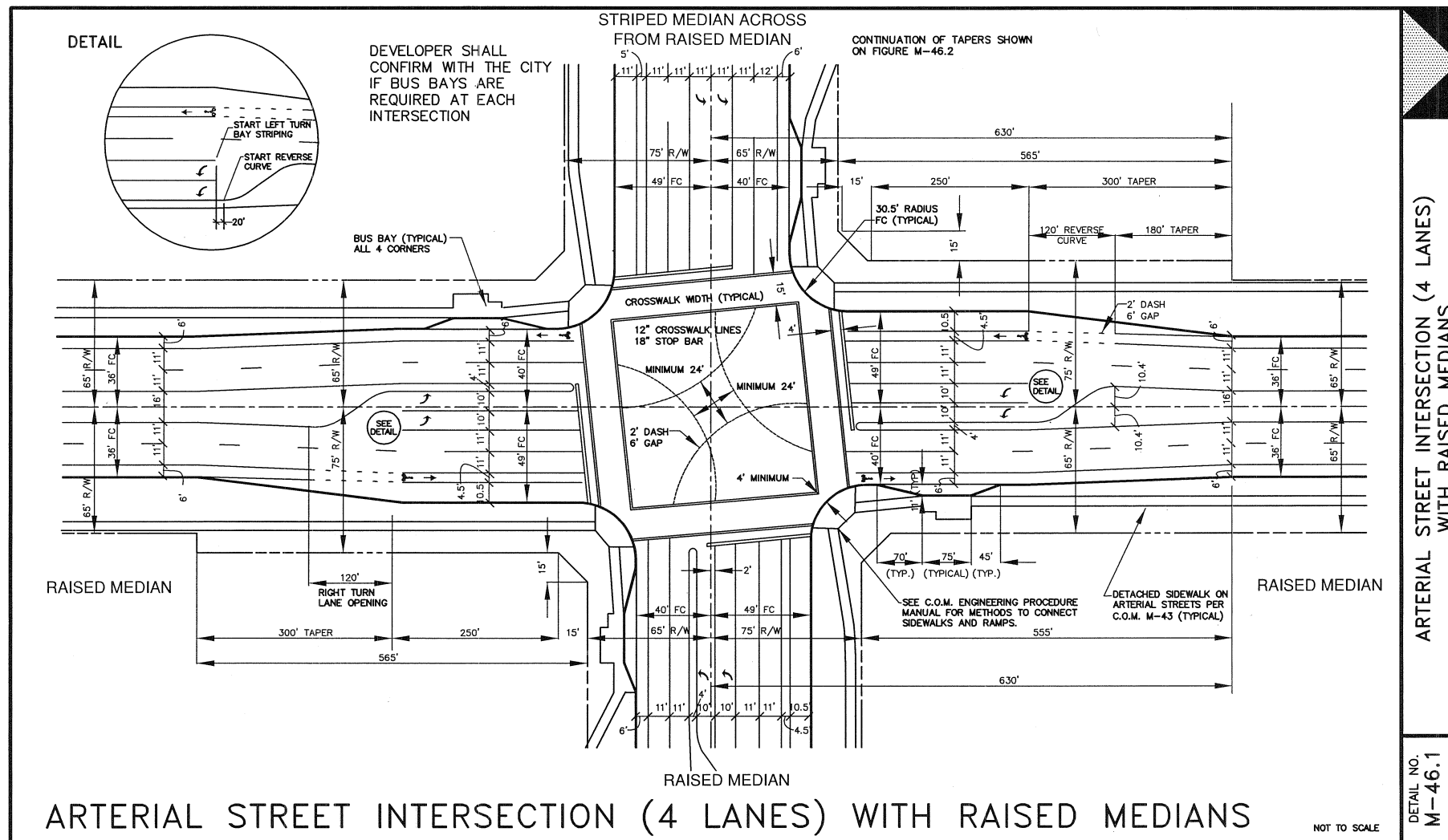
DETAIL NO.
G-3210

CITY OF GOODYEAR
STANDARD DETAIL

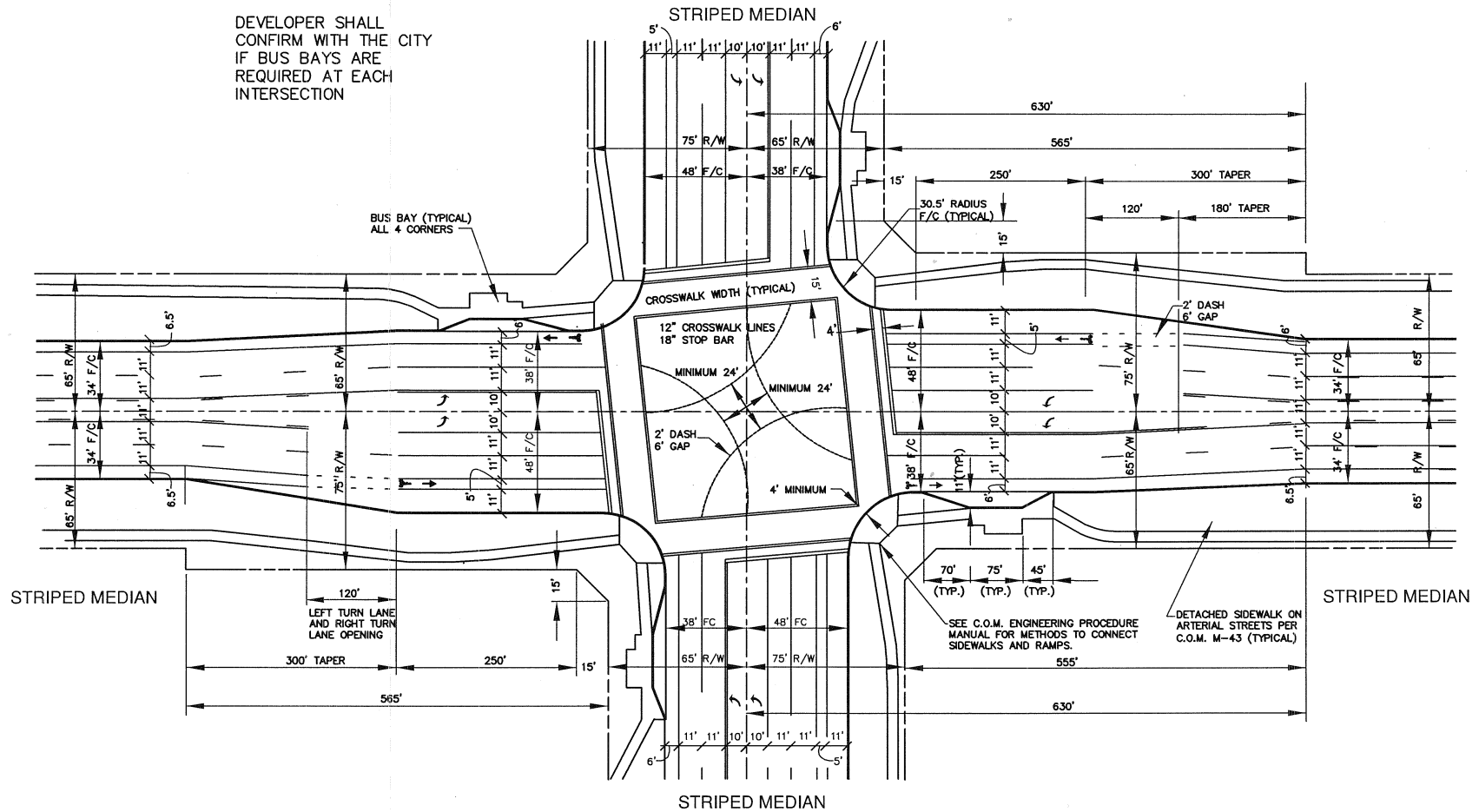
APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

PAVEMENT MARKER LAYOUT

DETAIL NO.
G-3210



DEVELOPER SHALL
CONFIRM WITH THE CITY
IF BUS BAYS ARE
REQUIRED AT EACH
INTERSECTION



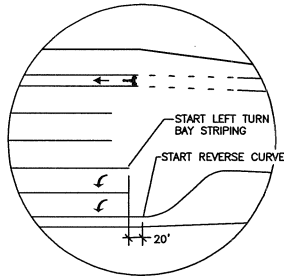
ARTERIAL STREET INTERSECTION (4 LANES) WITH STRIPED MEDIANS

NOT TO SCALE

ARTERIAL STREET INTERSECTION (4 LANES)
WITH STRIPED MEDIANS

DETAIL NO.
M-46.2

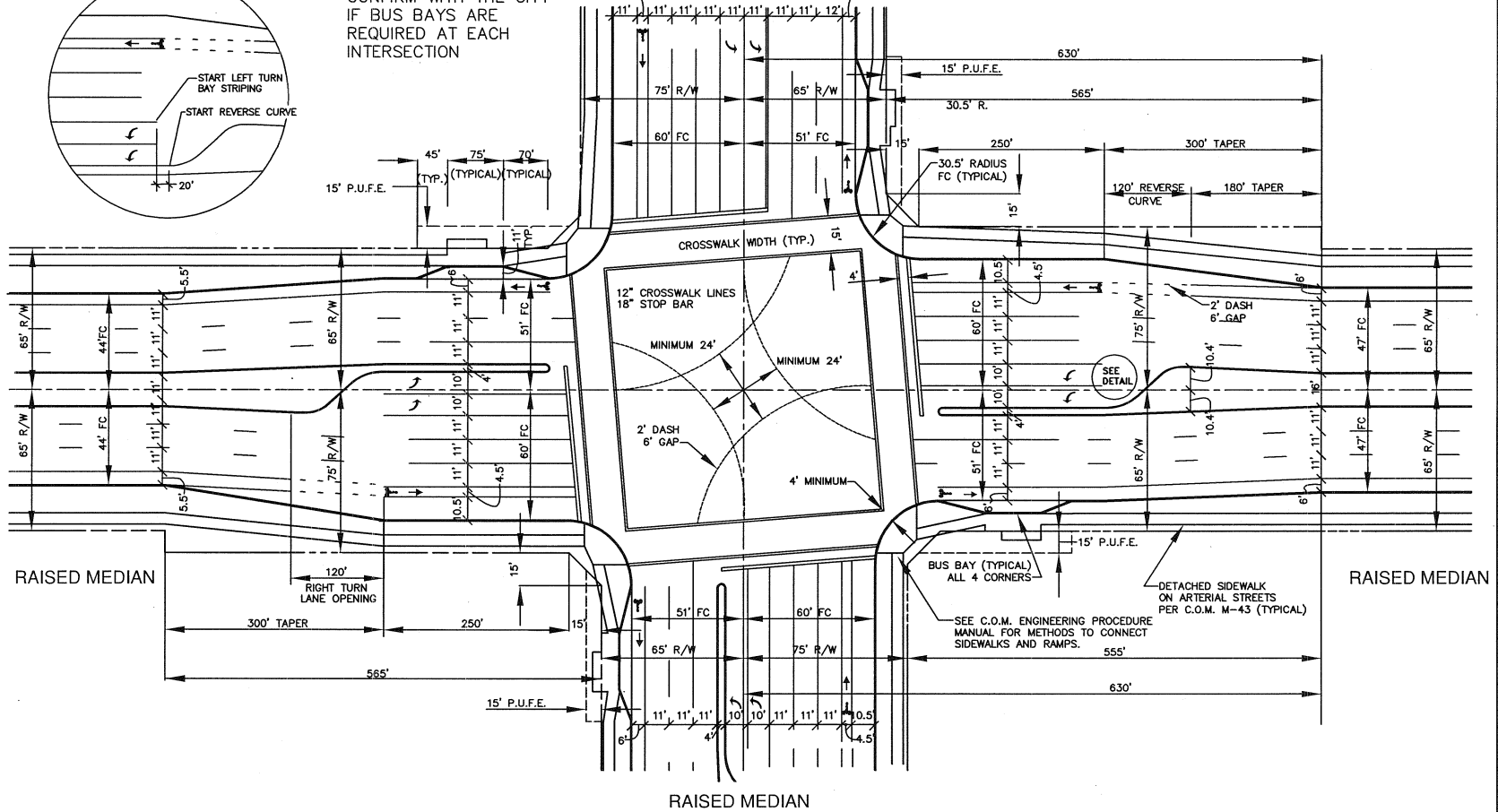
DETAIL



DEVELOPER SHALL
CONFIRM WITH THE CITY
IF BUS BAYS ARE
REQUIRED AT EACH
INTERSECTION

STRIPED MEDIAN ACROSS
FROM RAISED MEDIAN

CONTINUATION OF TAPERS SHOWN
ON FIGURE M-46.4



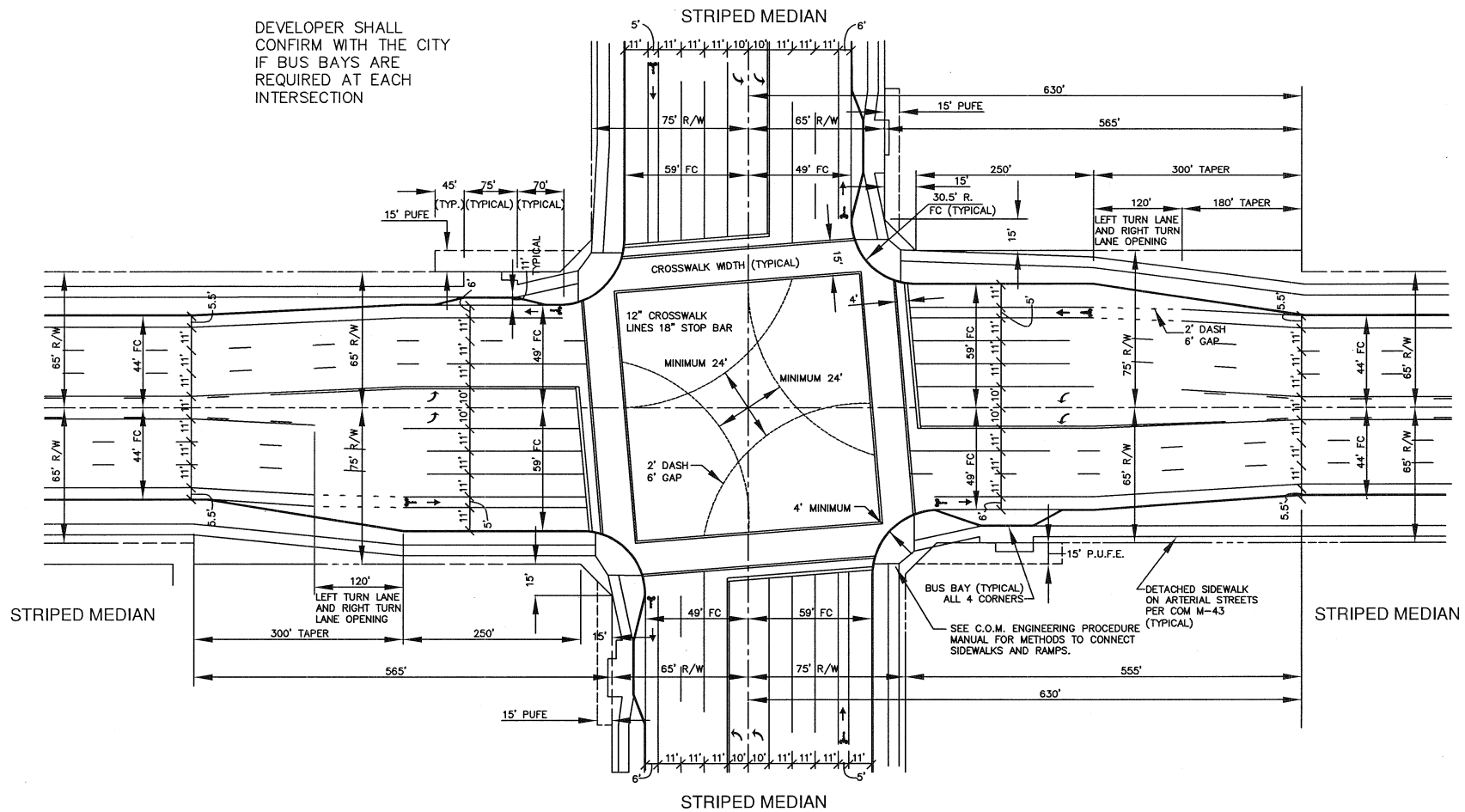
ARTERIAL STREET INTERSECTION (6 LANES) WITH RAISED MEDIANS

NOT TO SCALE

ARTERIAL STREET INTERSECTION (6 LANES)
WITH RAISED MEDIANS

DETAIL NO.
M-46.3

DEVELOPER SHALL
CONFIRM WITH THE CITY
IF BUS BAYS ARE
REQUIRED AT EACH
INTERSECTION



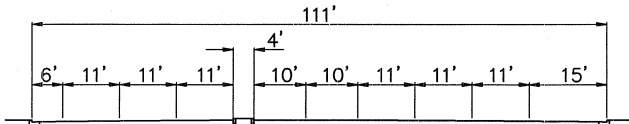
ARTERIAL STREET INTERSECTION (6 LANES) WITH STRIPED MEDIANS

NOT TO SCALE

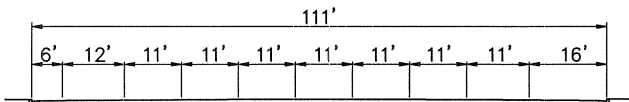
ARTERIAL STREET INTERSECTION (6 LANES)
WITH STRIPED MEDIANS

DETAIL NO.
M-46.4

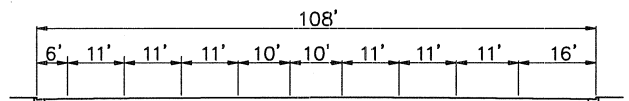
**111' AT MAJOR INTERSECTION
(RAISED MEDIAN PLUS RIGHT TURN LANE)**



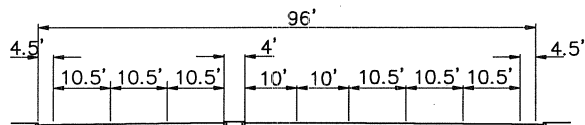
**111' AT MAJOR INTERSECTION
(NO RAISED MEDIAN PLUS RIGHT TURN LANE)**



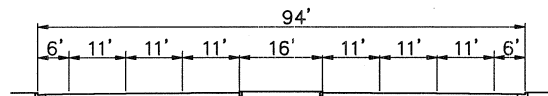
**108' AT MAJOR INTERSECTION
(NO RAISED MEDIAN PLUS RIGHT TURN LANE)**



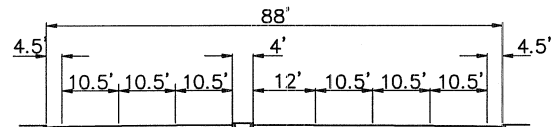
96' ROADWAY (RAISED MEDIAN)



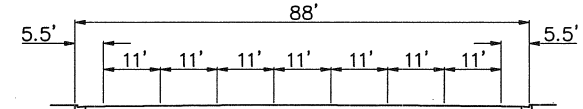
94' ROADWAY (RAISED MEDIAN)



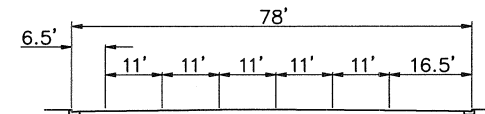
88' ROADWAY (RAISED MEDIAN)



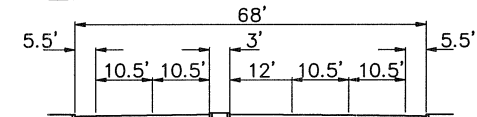
88' ROADWAY (NO RAISED MEDIAN)



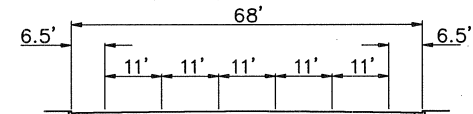
**78' ROADWAY
(78' STREET PLUS 10' RIGHT TURN LANE)**



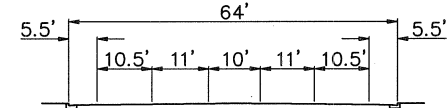
68' ROADWAY (RAISED MEDIAN)



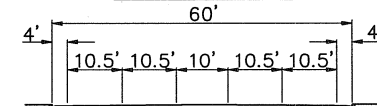
68' ROADWAY (NO RAISED MEDIAN)



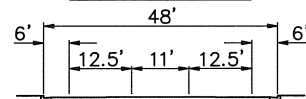
64' ROADWAY



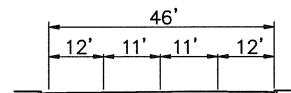
60' ROADWAY



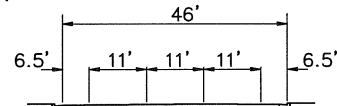
48' ROADWAY



**46' ROADWAY
(PARKING ON BOTH SIDES)**

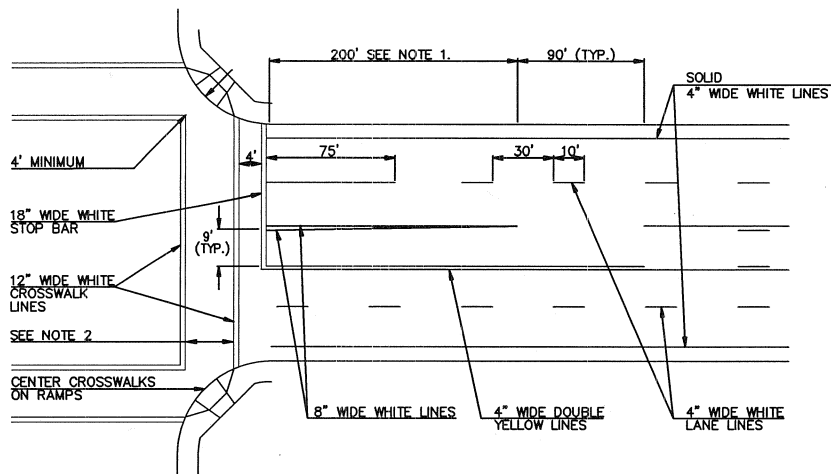


**46' ROADWAY
(W/LEFT TURN CENTER LANE)**



TYPICAL STRIPING CROSS SECTIONS

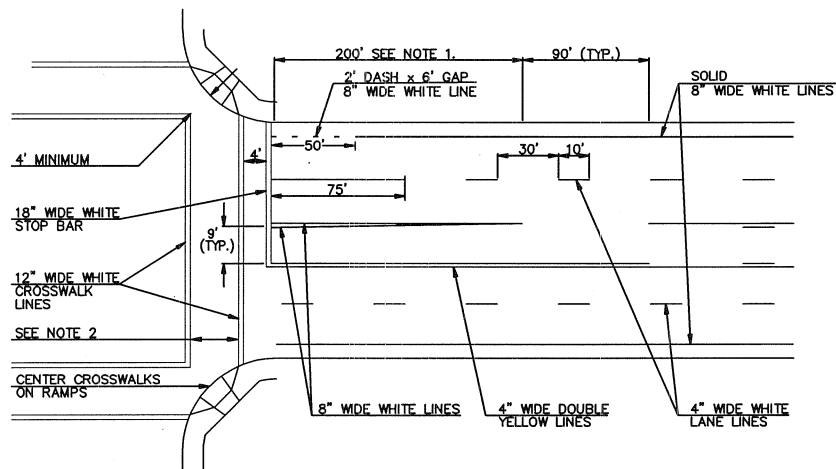
DETAIL NO.
M-46.6



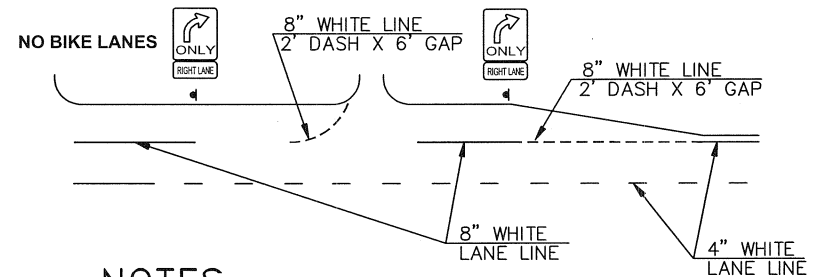
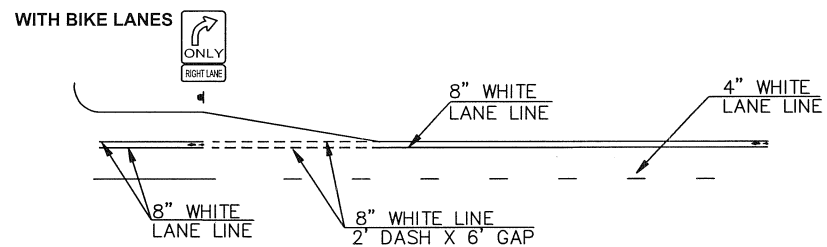
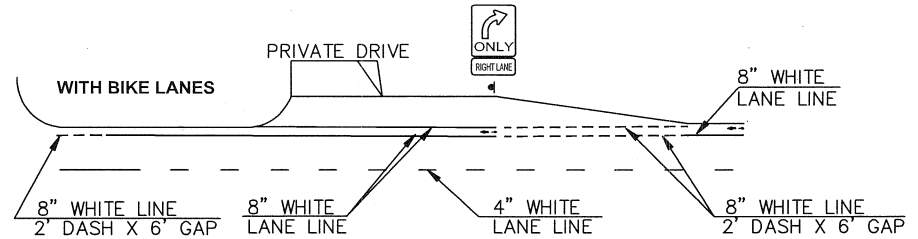
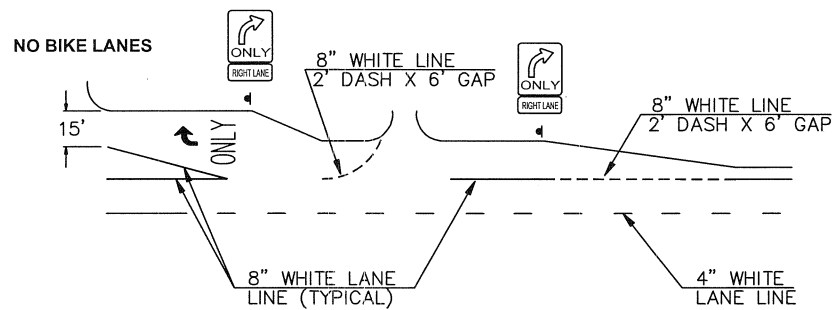
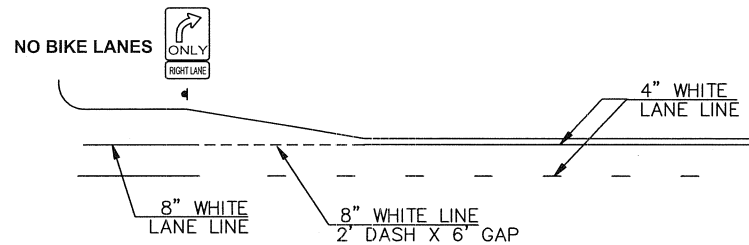
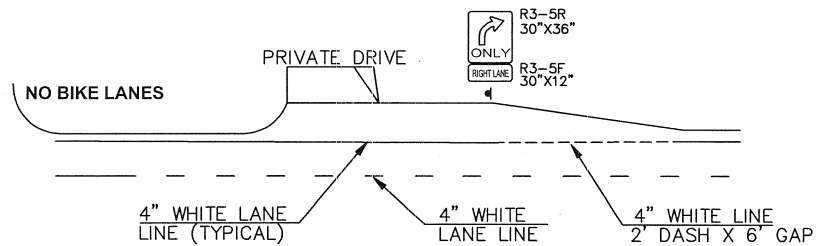
NO BIKE LANES

NOTES:

1. LEFT TURN LANE LENGTH MAY VARY TO SUIT SPECIFIC CONDITIONS. USE 100' TYPICAL AT NON-ARTERIAL STREETS.
2. TYPICAL WIDTH IS 10'. USE 15' AT INTERSECTIONS WITH EXISTING DUAL LEFT TURN LANES OR WHERE WIDTH IS SUFFICIENT FOR DUAL LEFT TURN LANES BUT STRIPING IS FOR A SINGLE LEFT TURN PLUS A CARROT.



WITH BIKE LANES

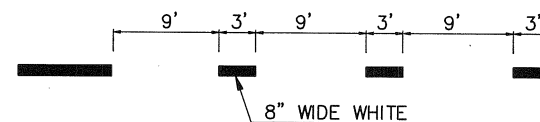
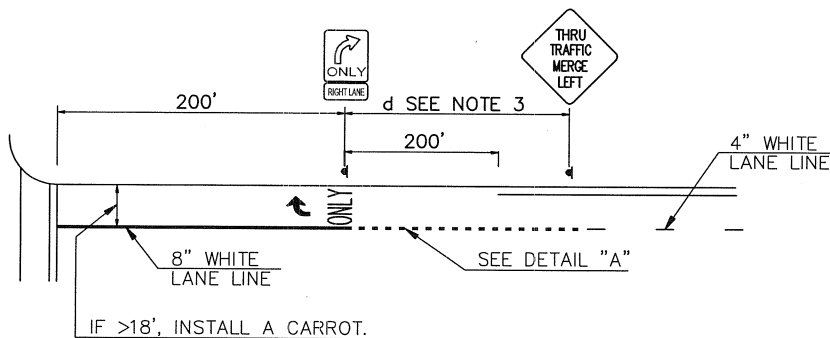
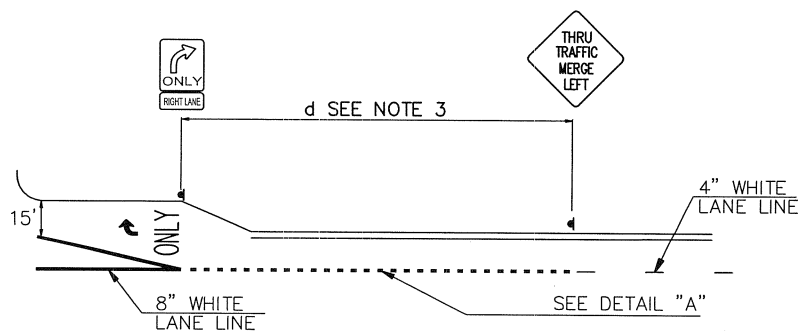


NOTES:

1. R3-5R AND R3-5F PLAQUE AT ALL RIGHT TURN LANES.
2. "ARROW" AND "ONLY" PAVEMENT MARKINGS AT RIGHT TURN TRAPS AND EXTRA WIDE RIGHT TURN LANES (20' OR MORE).
3. SEE DETAIL M-47.3 FOR ARROW AND "ONLY" MARKING DETAILS.

RIGHT TURN LANE TREATMENTS

DETAIL NO.
M-47.1



DETAIL A

* POSTED SPEED (MPH)	d ^① (FT)
20	175
25	250
30	325
35	400
40	475
45	550
50	625
55	700
60	775

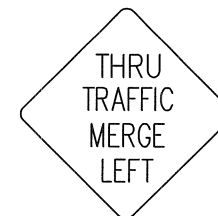
① EXCERPT FROM MUTCD 2000 TABLE 2C-4.

* THE DESIRED WARNING SIGN PLACEMENT DISTANCE IS BASED ON THE DESIGN SPEED, WHICH IS THE POSTED SPEED LIMIT PLUS 5 MPH.

R3-5R
30"X36"



36"X36"



R3-5F
30"X12"

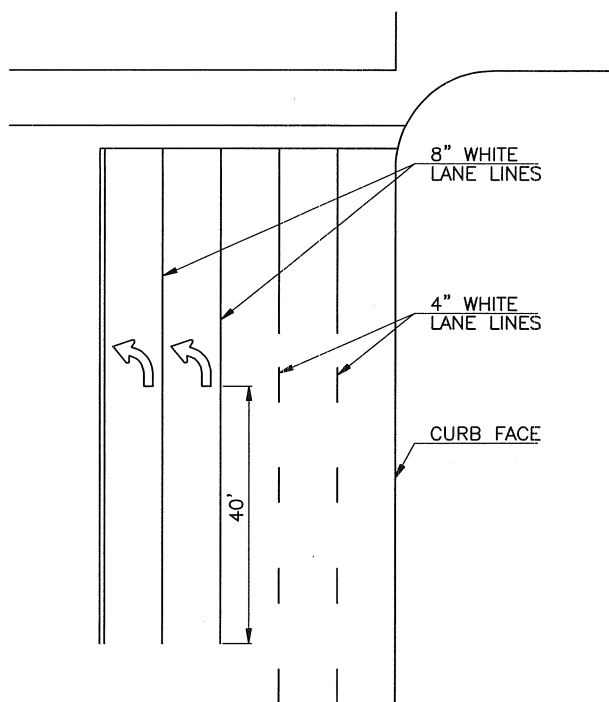
RIGHT LANE

NOTES:

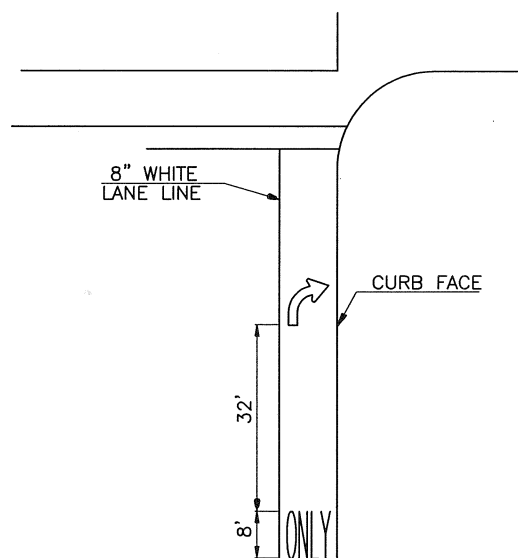
1. R3-5R AND R3-5F PLAQUE AT ALL RIGHT TURN LANES.
2. "ARROW" AND "ONLY" PAVEMENT MARKINGS AT RIGHT TURN TRAP LANE.
3. DISTANCE FOR "d" PER TABLE 2C-4 OF THE MUTCD, 2000 EDITION. "GUIDELINES FOR ADVANCE PLACEMENT OF WARNING SIGNS", USE CONDITION A.
4. SEE DETAIL M-47.3 FOR ARROW AND "ONLY" MARKING DETAILS.

NOTES:

1. INSTALL LEFT ARROWS 40' BEYOND BEGINNING OF LEFT TURN BAYS.
2. DO NOT INSTALL "ONLY" WORD MARKING IN LEFT TURN LANES UNLESS SPECIFIED.
3. DO NOT INSTALL LEFT ARROWS IN SINGLE LEFT TURN LANES UNLESS SPECIFIED.
4. INSTALL RIGHT ARROW "ONLY" WORD MARKING AT RIGHT TURN TRAPS AND EXTRA WIDE RIGHT TURN LANES (20 FEET OR MORE). SEE DETAILS M-47.1, M-47.2 FOR "RIGHT TURN TREATMENTS".
5. INSTALL "ONLY" AT BEGINNING OF RIGHT TURN BAY.
6. INSTALL ARROW MARKING 32' BEYOND "ONLY" WORD MARKING.
7. "ONLY" MARKING PER ADOT STANDARD DRAWING 4-M-1.12. ARROW MARKING PER ADOT STANDARD DRAWING 4-M-1.16
8. ALL LEGENDS AND SYMBOLS SHALL BE APPLIED IN 0.090 INCH WHITE PREFORMED THERMOPLASTIC "HOT" TAPE PER ADOT STANDARD SPECIFICATIONS.

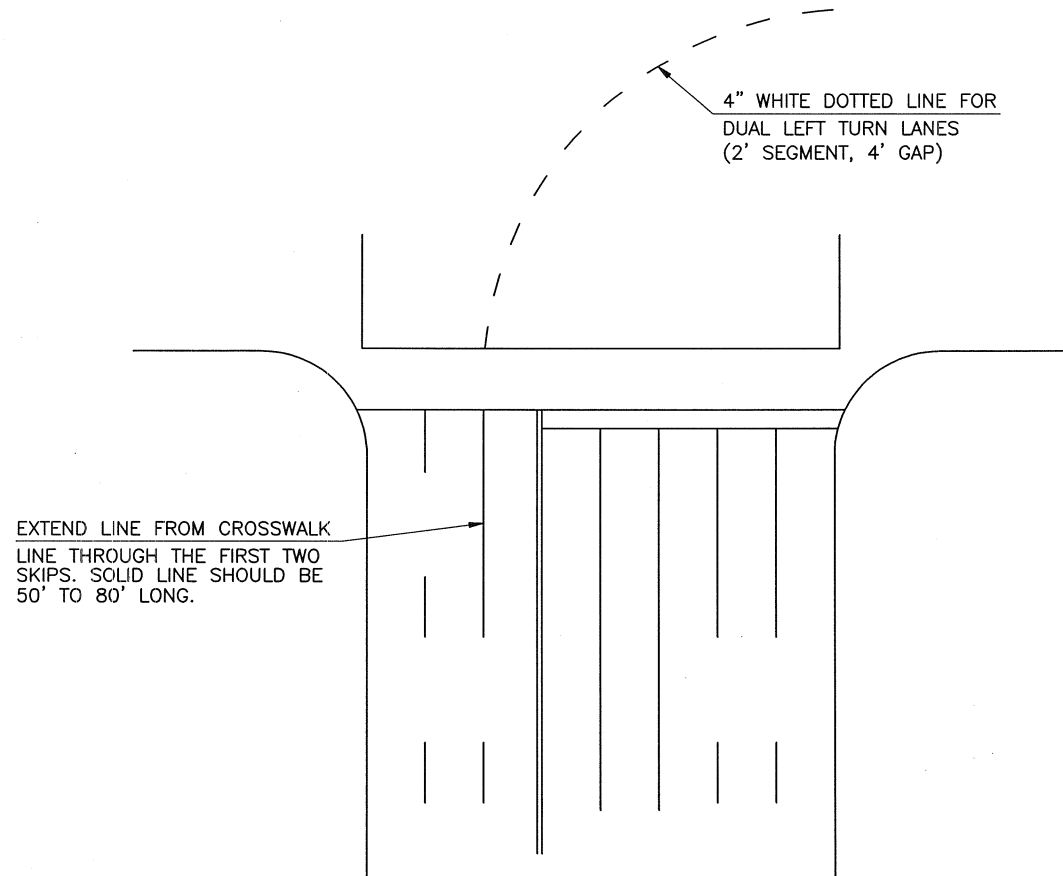


DUAL LEFT TURN LANES

RIGHT TURN TRAP LANES OR
EXTRA WIDE RIGHT TURN LANES

NOTE:

DOTTED LINE SHALL BE TYPE 1 PREFORMED PLASTIC
PAVEMENT MARKING PER ADOT STANDARD SPECIFICATION
SECTION 705.

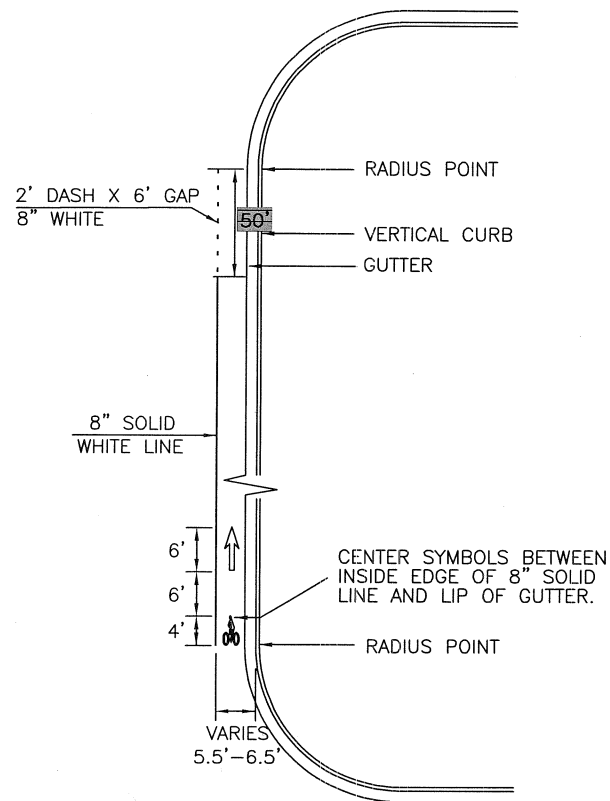


DUAL LEFT TURN LANE LINE EXTENSION

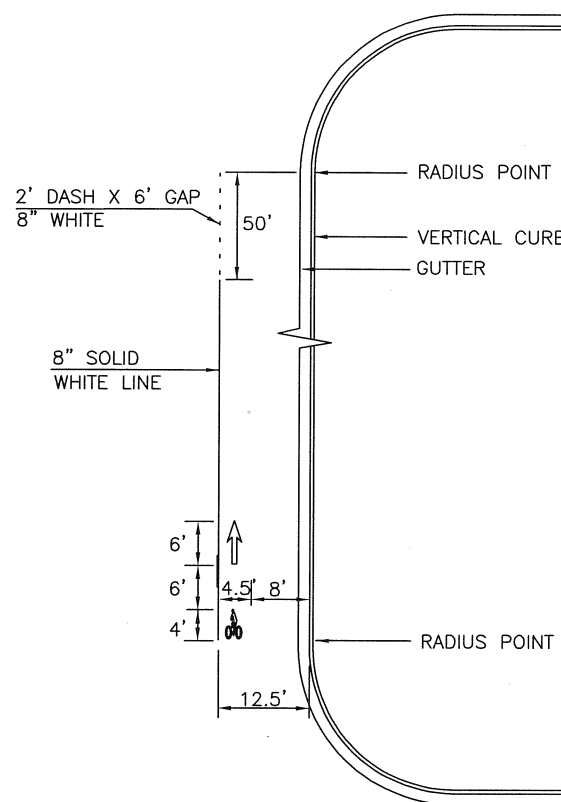
DETAIL NO.
M-47.4

TYPICAL BIKE LANE LAYOUTS

TYPICAL BIKE LANE LAYOUT



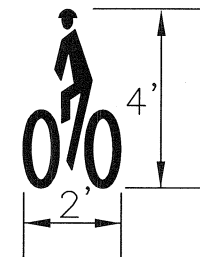
TYPICAL LAYOUT FOR SHARED BIKE/PARKING LANES



NOTES:

1. INSTALL BIKE LANE MARKINGS AFTER EACH INTERSECTION.
2. SYMBOL SPACING NOT TO EXCEED 500 FT.
3. BIKE RIDER FACES TOWARDS TRAFFIC.
4. BIKE RIDER WEARS HELMET.
5. ALL LEGENDS AND SYMBOLS SHALL BE APPLIED IN 0.075 INCH PREFORMED THERMOPLASTIC "HOT" TAPE. PER ADOT STANDARD SPECIFICATIONS.

BIKE RIDER DETAIL



TYPICAL BIKE LANE LAYOUTS

DETAIL NO.
M-47.5

PEORIA DETAIL

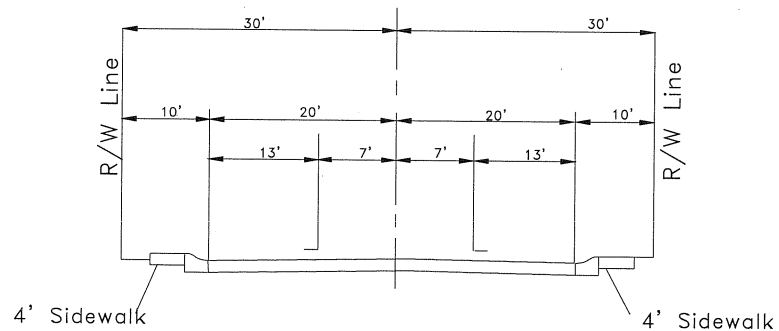
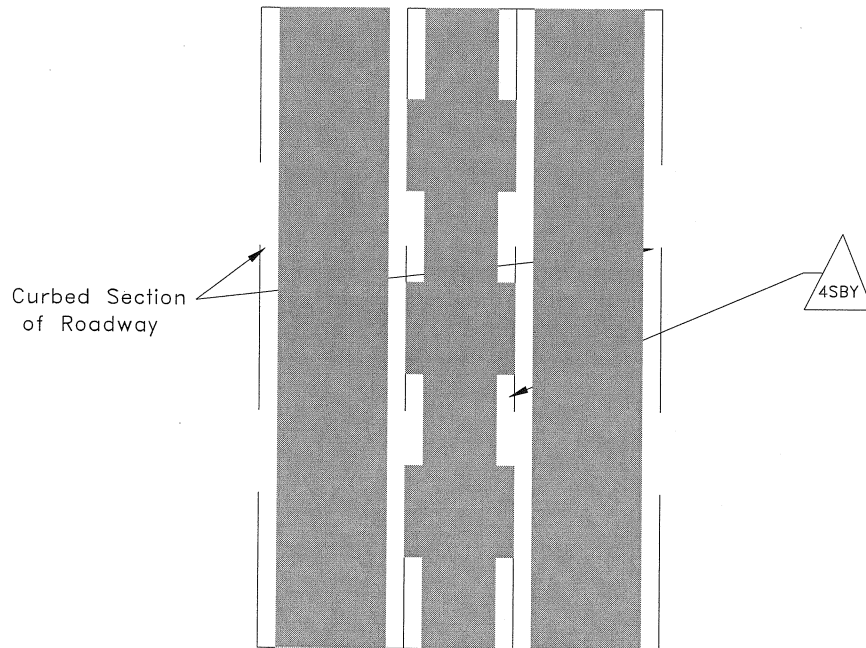
PAVEMENT MARKING MANUAL



APPROVALS:

CITY ENGINEER

DATE



(With a Center Two-Way Left Turn Lane)
(N.T.S.)

GENERAL NOTES

1. Where Roadway conditions do not permit use of this standard, alternate treatment shall be approved by the County Traffic Engineer or his designated representative.
2. All striping dimensions shall be to center of lines.
3. Final layout and/or field adjustments of pavement marking shall be approved by the County Traffic Engineer or his designated representative.

LEGEND



4" Double yellow line
one solid, one broken with a
15' line segment and a 25' gap

PEORIA DETAIL

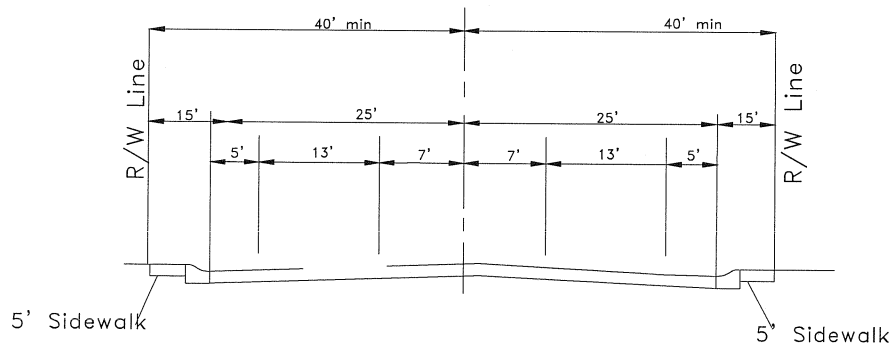
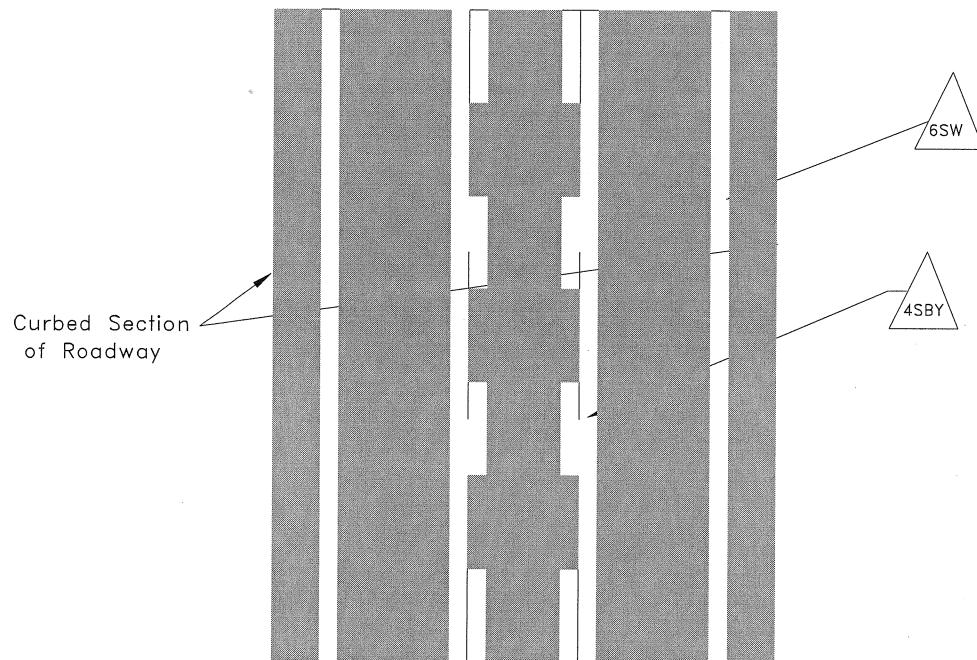
PAVEMENT MARKING MANUAL



APPROVALS:

CITY ENGINEER

DATE



(Widened Section For Left Turn Lane)
(N.T.S.)

GENERAL NOTES

1. Where Roadway conditions do not permit use of this standard, alternate treatment shall be approved by the County Traffic Engineer or his designated representative.
2. All striping dimensions shall be to center of lines.
3. Final layout and/or field adjustments of pavement marking shall be approved by the County Traffic Engineer or his designated representative.

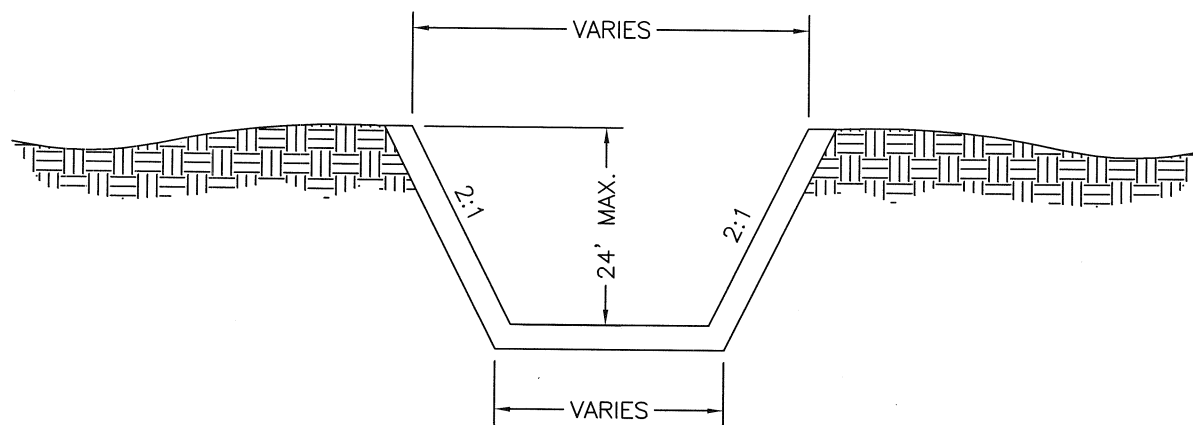
LEGEND



6" Solid white line



4" Double yellow line
one solid, one broken with a
15' line segment and a 25' gap



DETAIL NO.
10

TOWN OF GILBERT
STANDARD DETAIL

IRRIGATION DITCH

REVISED 1/2005

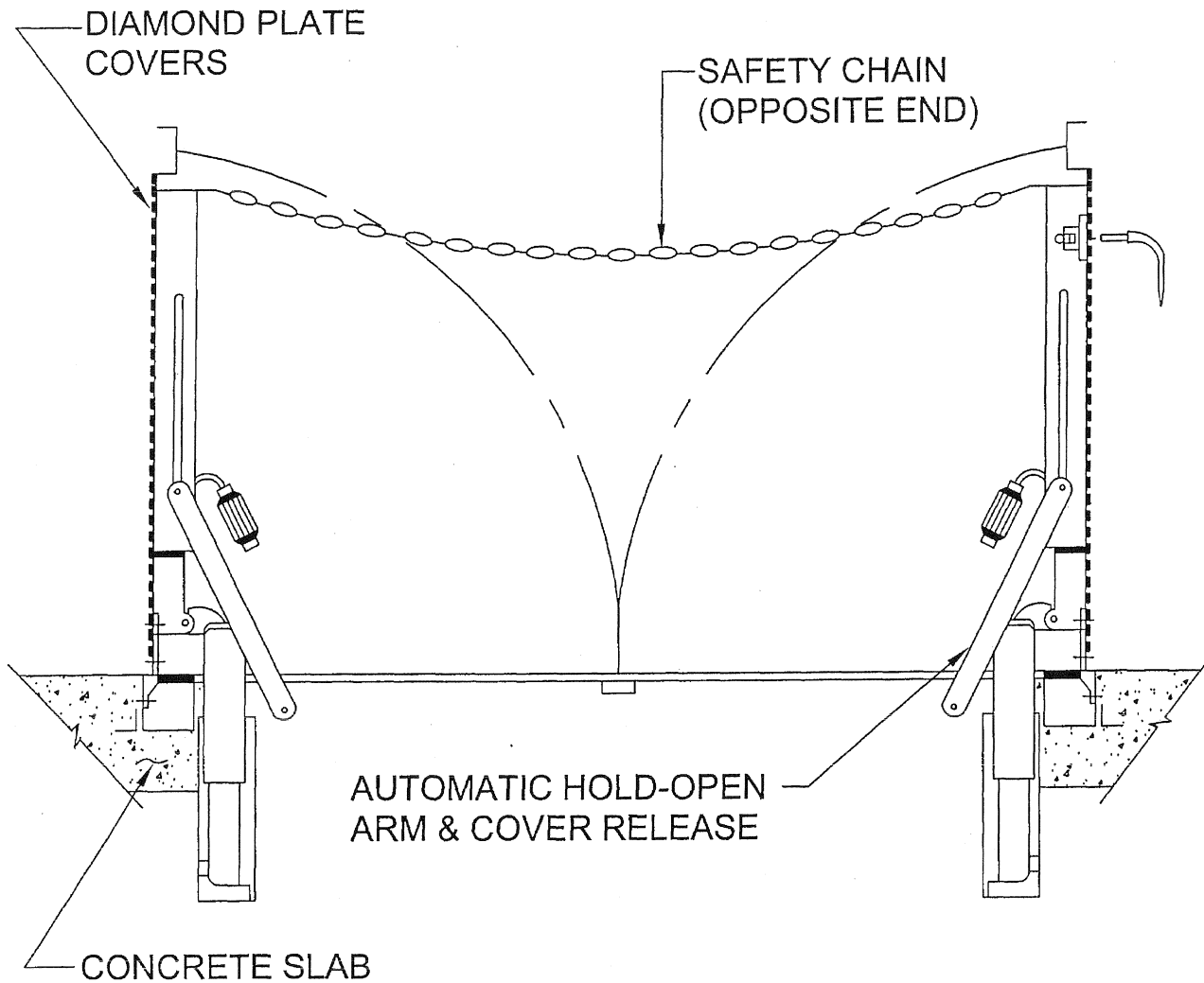
DETAIL NO.
10

STANDARD DETAIL G-1000

CITY OF GLENDALE
ENGINEERING



EFFLUENT DISTRIBUTION VAULT ACCESS HATCH



APPROVED BY:

Larry J. Broyles

CITY ENGINEER

6/28/02

DATE

REVISED: JUNE 2002

APPROVED:

MINIMUM TREE SIZE REQUIREMENTS

Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper
X					X					ARGENTINE MESQUITE (M)(PROSOPIS ALBA)	15	5	3	0.75	VELVET\ARIZONA (M) (PROSOPIS VELUNTINA)	15	5.5	3	0.5	SONORAN (CERCIDIUM PRAECOX)	15	6	2	0.75
BLUE LEAF WATTLE (ACACIA SALIGNA)	15	6	2	0.75	WEeping (ACACIA PENDULA)	15	5	2	0.75		24	8	5	1.25		24	7	4	1		24	7	4	1.5
	24	8	4	1.5		24	6.5	3	1.5		30	9	7	1.5		30	9	6	1.5		30	8	6	2
	30	10	5	2		30	9	5	2		36	11	9	2		36	10	8	2		36	10	8	2.5
	36	12	6	2.5		36	11	6	2.5		42	13	11	2.5		42	12	10	2.5		42	11	10	3
BERLANDER\GUAYILLO (M)(ACACIA BERLANDIER)	15	4	2	0.5	WILLOW\ AUSTRALIAN WILLOW (ACACIA SALICINA)	15	6	2	0.75	X					X					SONORAN(M) (CERCIDIUM PRAECOX)	15	5	2	0.5
	24	5	4	1		24	8	4	1.5	CHILEAN MESQUITE (PROSOPIS CHILENSIS)	15	6	2	0.75	BLUE PALO VERD (CERCIDIUM FLORIDIUM)	15	6	2	0.75		24	7	4	1
	30	7	5	1.5		30	10	5	2		24	8	4	1.25		24	7.5	4	1.5		30	8	6	1.5
	36	9	6	2		36	14	6	2.5		30	9	6	1.5		30	9	7	2		36	10	8	2
MULGA (ACACIA ANEURA)	15	5	2	0.75	X						42	12	10	2.5		36	10	8	2.5		42	11	10	2.5
	24	7	4	1.5	DESERT IRONWOOD (OLNEYA TESOTA)	15	3	2	0.5		48	14	12	3		42	12	9	3		48	12	12	3
	30	9	6	2		24	6	3	1.25	CHILEAN MESQUITE (PROSOPIS CHILENSIS)	15	5	3	0.5		48	14	10	3.5	X				
	36	10	8	2.5		30	8	6	2		24	8	5	1	BLUE PALO VERD (M) (CERCIDIUM FLORIDIUM)	15	5	3	0.5	AFRICAN SUMAC (RHUS LANCEA)	15	7	2	0.75
SHOESTRING (ACACIA STENOPHYLLA)	15	7	2.5	0.75		36	10	8	2.5		30	9	7	1.5		24	7	4	1		24	9	4	1.25
	24	9	4	1.5		42	11	9	3		36	10	9	2		30	8	6	1.5		30	11	6	2
	30	11	5	2		48	12	10	3.5		42	12	11	2.5		36	10	8	2		36	12	8	2.5
	36	13	6	2.5							48	14	13	3		42	12	9	2.5		42	14	8	3.5
	42	15	7	3	DESERT IRONWOOD (M) (OLNEYA TESOTA)	15	3	2	0.5							48	14	11	3		48	15	9	4
	48	17	8	4		24	6	3	1.25	HONEY MESQUITE (PROSOPIS-GLANDULOSA)	15	6	2	0.75	BLUE PALO VERD (M) (CERCIDIUM FLORIDIUM)	15	4	2	0.5	AFRICAN SUMAC (M) (RHUS LANCEA)	15	5	3	0.75
SHOESTRING (M) (ACACIA STENOPHYLLA)	15	7	2.5	.5		30	8	6	2		24	8	4	1.5		24	6	3	1		24	8	4.5	1
	24	9	4	1		36	10	8	2.5		30	9	6	2		30	7	5	1.5		30	9	7	1.5
	30	13	6	2		42	11	9	3		36	10	8	2.5		36	8	6	2		36	11	8	2
SWEET (ACACIA SMALLI)	15	6	2.5	0.75	X						42	12	10	3	LITTLE LEAF\ FOOTHILLS (M)(CERCIDIUM-MICROPHYLLUM)	15	4	3	0.5		42	13	9	2.5
	24	8	4	1.5	ARGENTINE MESQUITE (PROSOPIS ALBA)	15	6.5	2	0.75	SCREW BEAN (M) (PROSOPIS-PUBESCENS)	15	5.5	3	0.5		24	5	4	1	ALEPPO (PINUS HALEPENSIS)	15	6	3	0.75
	30	9	6	2		24	8	4	1.5		24	8	4	1		36	8	7	2		24	9	4	2
	36	10	8	2.5		30	9	6	2		30	9	6	1.5							30	11	6	3
	42	12	10	3		36	11	8	2.5		36	10	8	2							36	14	7	3.5
	48	14	12	3.5		42	13	10	3		42	12	10	3							42	16	9	4
SWEET (M) (ACACIA SMALLI)	15	5	3	.5		48	15	12	3.5		48	14	12	3.5							48	18	10	4.5
	24	8	5	1																				
	30	9	7	1.5																				
	36	10	9	2																				
	42	12	10	2.5																				
	48	14	12	3																				

MINIMUM TREE SIZE REQUIREMENTS

Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper					
ARIZONA ASH ((FRAXINUS VELUTINA)	15	8	2	1	CANARY ISLAND PINE (PINUS CANARIENSIS)	15	6	2	0.75	COOLIBAH (EUCALYPTUS-MICROTHECA)	15	7	3	0.75	FEATHER BUSH\ FERN OF THE DESERT (LYSILOMA THORNBERI)	15	5	3	0.75	JACARANDA (JACARANDA ACUTIFOLIA)	15	8	2	0.75					
	24	10	4	1.5		24	9	4	2		24	10	4	1.5		24	6.5	4	1.25		24	9	4	1.5					
	30	12	5	2		30	13	5	3.5		30	12	5	2		30	7	6.5	2		30	10	5	2.5					
	36	14	8	2.5		36	17	5	4		36	15	6	2.5		36	8	6	2.5		36	12	8	3					
	42	15	9	3		42	18	6	4.5		42	4	2	0.75		42	4	3	0.75		42	14	8	3.5					
ARIZONA SYCAMORE (ACACIA BERLANDIER)	48	14	10	3.5	48	22	7	5.5	48	22	7	5.5	48	6.5	3	1.5	48	5	5	1	48	16	9	4					
	15	5	2	1	CAROB (CERATONIA SILQUA)	15	8	2	0.75	30	9	4.5	2.5	30	7	7	1.5	JACARANDA (M) (JACARANDA ACUTIFOLIA)	15	5.5	3	0.5							
	24	7	4	1.5		24	9	4	1.5	36	12	6	3.5	36	8	8	2		24	8	5	0.75							
	30	9	6	2.5		30	10	5	2	42	14	9	4	FICUS (FICUS NITIDA)	15	8	2		0.75	30	10	6	1.5						
	36	13	8	3.5		36	12	5	3	48	16	11	4.5	36	8	2	0.75		36	12	7	2							
24	8	4	1	24		8	3.5	1.25	24	8	3.5	1.25	36	12	6	3	LEMON BOTTLE BRUSH (CALLISTEMON CITRINUS)		15	8	2	0.75							
ARIZONA SYCAMORE(M) (ACACIA BERLANDIER)	30	12	7	2	30	7	5	2	36	8	6	2.5	36	8	6	2.5		36	12	6	2.75								
	36	15	9	3	36	12	5	3	48	16	11	4.5	48	16	11	4.5		48	16	11	4.5								
	15	6	3	0.5	CHASTE TREE (VITEX ANGUS-CASTUS)	15	5	3	0.75	15	6	2.5	0.75	15	6	2.5		0.75	15	5.5	3	0.5							
	24	8	4	1		24	6	4	1.25	24	8	3.5	1.25	24	8	3.5		1.25	24	9	4	1.25							
	30	12	7	2		30	7	5	2	30	7	5	2	30	7	5	2	30	10	5	2								
AUSTRALIAN WILLOW\ WILGA (GEIJERA PARVIFLORA)	36	15	9	3		36	8	6	2.5	36	8	6	2.5	36	8	6	2.5	36	12	6	2.75								
	15	5	3	0.75		15	7	2	0.75	15	7	2	0.75	15	7	2	0.75	15	2	2	N/A								
	24	8	4	1.25	24	8	3	1.25	24	8	3	1.25	24	8	3	1.25	24	3	3	N/A									
	30	10	5	2	30	12	6	2	30	12	6	2	30	12	6	2	30	4	4	N/A									
	36	12	5.5	2.5	36	14	8	2.5	36	14	8	2.5	36	14	8	2.5	36	5	5	N/A									
BOTTLE TREE (BRACHYCHITON-POPULNEUS)	24	9	4	2.5	24	16	9	3.5	24	16	9	3.5	24	7	5	1	24	10	4	1	MESCAL BEAN\TEXAS MOUNTAIN LAUREL (SOPHORA-SECUNDIFLORA)	15	3	1	0.75				
	30	12	5	4	30	18	10	3.75	30	18	10	3.75	30	10	8	2	30	9	4	1.25		24	4	2	1				
	36	15	6	5	CHINESE PISTACHE (PISTACIA CHINESIS)	15	7	2	0.75	15	6	2	1.5	15	6	2	1.5	15	6	2		1.5	30	5	3	1.75			
	42	17	8	6		24	9	4	1.5	24	9	4	1.5	24	10	4	2	24	10	4		2	36	6	4	2			
	48	20	9	6.5		30	10	5	2.5	30	10	5	2.5	30	13	4	3	30	13	4		3	42	15	11	3			
BAZILIAN PEPPER (SCHINUS-TEREBINTHIFOLIA)	36	12	8	3		36	12	6	3.5	36	12	6	3.5	36	15	5	4	36	15	5	4	48	17	12	3.5				
	15	8	2	0.75		CHIR PINE\INDIAN LONG LEAF (PINUS ROXBURGHII)	15	5	3	1	15	6	2	1.5	15	6	2	1.5	15	6	2	1.5	15	8	2	0.75			
	24	9	4	1.25	24		8	4	2	24	8	4	2	24	10	4	2	24	10	4	2	24	9	4	1.5				
	30	10	5	2.5	30		11	6	2.5	30	11	6	2.5	30	13	4	3	30	13	4	3	30	11	8	2				
	CALIFORNIA PEPPER (SCHINUS MOLLE)	36	12	8	3		36	15	6.5	3.5	36	15	6.5	3.5	36	17	8	4.5	36	17	8	4.5	36	17	8	4.5	36	12	8
24		8	4	1.25	42		17	8	4.5	42	17	8	4.5	42	17	8	4.5	42	17	8	4.5	42	17	8	4.5	42	17	8	4.5
30		10	6	2.5	48	20	9	5	48	20	9	5	48	20	9	5	48	20	9	5	48	20	9	5	48	20	9	5	
36		12	8	3																									

MINIMUM TREE SIZE REQUIREMENTS

Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper									
MODESTO ASH (FRAXINUS V MODESTO)	15	8	2	1	RAYWOOD ASH\CLARET ASH (FRAXINUS O RAYWOODII)	15	8	4	1	SILK TREE MIMOSA(M) (ALBIZIA JUBRISSIA)	15	5	3.5	0.5	SILK TREE MIMOSA(M) (ALBIZIA JUBRISSIA)	15	6	3	0.75									
	24	10	4	1.5		24	10	3	1.5		24	6.5	5	0.75		24	8	4	1.5									
	30	12	6	2		30	12	5	2		30	6	6	1		30	10	6	2									
	36	14	7	2.5		36	14	8	2.5		36	10	8	2.5		36	12	8	3									
	42	16	8	3		42	16	10	3		42	10	8	2.5		42	14	10	3									
NARROW LEAF GIMLET SWAMP MALLET (EUCALYPTUS-SPATHULATA)	15	6	2.5	0.75	RED CAP GUM (EUCALYPTUS-ERYTHROCORYES)	15	6	2.4	0.75	SILVER DOLLAR GUM (EUCALYPTUS-POLYANTHEMOS)	15	7	3	0.75	TEXAS EBONY (PITHECELLOBIUM-FLEXICAULE)	15	4	2	0.5									
	24	8	3	1		24	8	4	1.25		24	10	4	1.5		24	6	4	1									
																30	7	6	1.5									
																36	9	8	2									
																42	10	10	2.5									
OLEANDER (NERIUM OLEANDER)	15	7	2	0.5	RED GUM (EUCALYPTUS-CAMALDULENSIS)	15	8	3	1	SISSOO (DALBERGIA SISSOO)	15	7	3	0.75	WEeping BOTTLE BRUSH (CERCIDIUM FLORIDIUM)	15	8	2	0.75									
	24	9	4	1.25		24	10	4	1.75		24	10	4	1.25		24	10	3.5	1.5									
	30	10	5	2							36	15	10	3		36	12	5	2									
	36	12	6	2.5							30	11	6.5	2		36	14	7	2.5									
	42	14	12	3							36	13	8	2.75		42	15	10	3.5	15	8	2	1					
OLIVE TREE (OLEA EUROPAEA)	15	5	3	0.5	RIO GRANDE\FAN TEXAS ASH (FRAXINUS V FANTEX)	15	7	2	0.75	SOUTHERN LIVE OAK (QUERCUS VIRGINIANA)	15	6	2	0.75	WEeping WILLOW (CERCIDIUM FLORIDIUM)	15	8	2	1									
	24	8	5.5	1.5		24	10	4	1.5		24	9	4	1.25		24	10	4	1.5									
	30	11	9	2		30	12	5	2		36	13	8	2.75		30	12	6	2.5									
	36	12	10	3		36	14	8	2.5		42	15	10	3.5		36	14	8	4									
	48	16	14	4		42	15	9	3.5		48	17	12	4.5		42	14	12	3.5	15	6.5	2.5	0.75					
ORCHID TREE (BAUHINIA)	15	8	2	0.75	SHAMEL\EVERGREEN (FRAXINUS UHDEI)	15	8	2	1	TEXAS EBONY (PITHECELLOBIUM-FLEXICAULE)	15	5	2	0.75	WHITE IRON BARK (EUCALYPTUS-LEUCOXYLON)	15	8	3.5	1.25									
	24	9	4	1.25		15	8	2	1		24	6	3	1.5		24	8	3.5	1.25									
	30	11	6	2		24	10	4	1.5		30	7	4	2														
	36	13	7	2.5		30	12	5	2.5		36	9	6	2.5		42	10	6	3	15	6	2	0.5					
						30	12	5	2.5		48	11	7	3.5		48	11	7	3.5	48	11	7	3.5	24	8	4	1.25	
ORNAMENTAL PEAR (PYRUS CALLERYANA)	15	7	2	1	SILK OAK (GREVILLEA ROBUSTA)	15	8	3	1		15	5	2	0.75	YELLOW OLEANDER (THEVETIA PERUVIANA)	15	4	3.5	0.5									
	24	10	3.5	1.5		24	10	4	1.5		24	6	3	1.5		24	8	3.5	1.25									
	30	12	6	2.5		30	12	5	2.5		30	7	4	2		30	12	6	2.5	24	6	5	0.75					
	36	14	8	3		36	14	8	3		36	9	6	2.5		36	14	8	4									
	42	16	10	3.5		42	15	9	3.5		42	15	9	3.5		42	15	9	3.5	42	15	9	3.5					

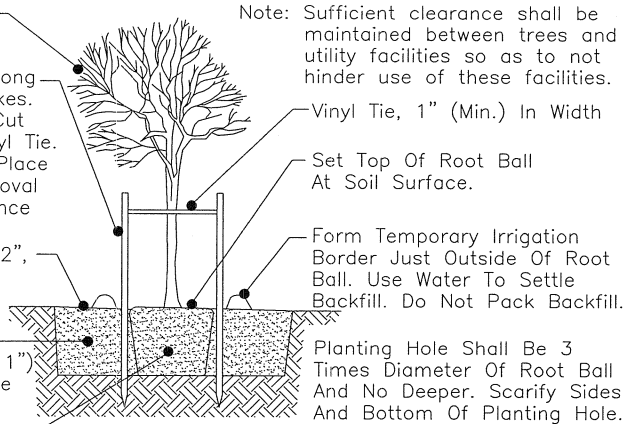
Prune Tree At Time Of Stake Removal.

(2) 2" Diameter x 10' Long Lodgepole Pine Tree Stakes. Bury 3' In Ground And Cut Off Stake 12" Above Vinyl Tie. Stakes Shall Remain In Place For 2 Years Unless Removal Is Approved By Maintenance Director.

Mulch To A Depth Of 1/2", 5' Diameter. Keep Mulch 6" Away From Trunk.

Backfill With Native Soil, (No Rocks Greater Than 1") Apply Fertilizer To Surface Away From Trunk Per Specifications.

Scarify One Side Of Root Ball Prior To Planting.

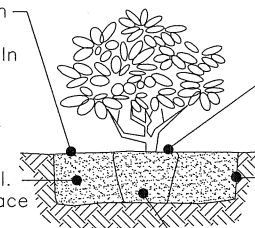


Tree Planting and Staking <36" Box Or 2" Caliper

Note: Sufficient clearance shall be maintained between trees and utility facilities so as to not hinder use of these facilities.

Mulch Soil To A Depth Of 2", 2' In Diameter For 1 Gal. Shrubs, 4' In Diameter For 5 Gal. Shrubs. Keep Mulch Away From Plant Base.

Backfill With Native Soil. Apply fertilizer To Surface Away From Trunk Per Specifications.

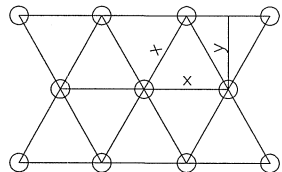


Set Top Of Root Ball At Soil Surface.

Planting Hole Shall Be 3 Times Diameter Of Root Ball And No Deeper. Scarify Sides And Bottom Of Planting Hole.

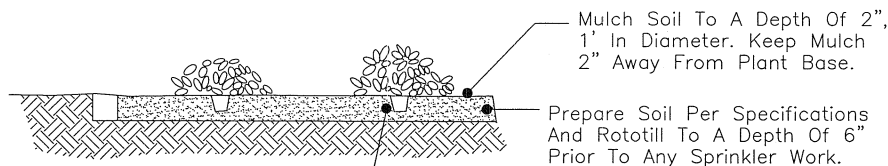
Scarify One Side Of Root Ball Prior To Planting.

Shrub Planting



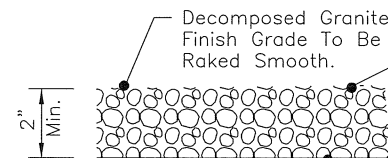
All Groundcovers To Be Planted On Center (See Plant Legend) In A Triangular Pattern.

X = O.C. Dimension As Noted On Plan
Y = 0.86 Of Dimension "X"



Backfill With Native Soil. Apply Fertilizer To Surface Away From Trunk Per Specifications.

Groundcovers



Provide Final Application Of Weed Control Upon Final Raking.

Fine Graded Subgrade

Apply Pre-Emergent Herbicide As Per Manufacturers Recommendations.(Surflan Or Equal Approved By City Of Scottsdale).

Decomposed Granite

DETAIL NO.
G-3610-1 CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

7/97

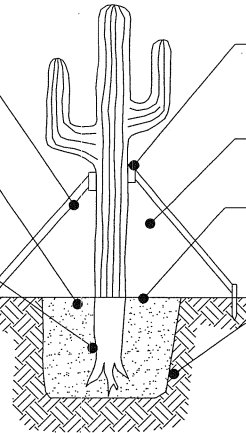
LANDSCAPE DETAILS

DETAIL NO.
G-3610-1

(3) 2"x6" BRACES, SPACED EQUALLY AND NAILED TO WOODEN STAKES IN THE GROUND. BRACES TO REMAIN IN PLACE FOR ONE YEAR MIN.

USE GOLF SAND OR 1/4" MINUS DECOMPOSED GRANITE TO BACKFILL PLANTING HOLE. BACKFILL 1/2 OF PIT, THEN COMPACT.

ROOT PRUNE ALL SHEDDED OR DAMAGED ROOTS AND DUST ENTIRE ROOT STRUCTURE WITH WETTABLE SULPHUR (1.5 MIN.) AND STREPTOMYCIN SPRAY AT PLANTING SITE. ROOT BALL MINIMUM SIZE SHALL BE 24" WITH A MINIMUM ROOT LENGTH OF 6" ON ALL SIDES.



4"x8" - DENSE FOAM AND CARPET PADDED, 8' ABOVE NATURAL GRADE AND NAILED TO BRACE.

STEEL BAND FASTENED WITH 2 TWO LARGE STAPLES PER BRACE.

6-1 GALLON EMITTERS IN 'HULA HOOP' DISTRIBUTION RUN ONCE A MONTH 24 TO 48 HOURS FOR ONE YEAR.

PLANTING HOLE WIDTH SHALL BE 3 TIMES DIAMETER OF ROOTS AND NO DEEPER THAN THE EXTENSION OF THE ROOTS.

Saguaro Planting

NOTES:

1. Optimum transplanting season is October thru November.
2. Maintain original plant orientation. The original "North" orientation shall be marked on a rib at a height of 5' above ground level.
3. Water thoroughly at the time of transplanting to remove air pockets and assure proper compaction. Backfill shall be free of injurious rocks and debris.
4. Do not water for 3 weeks after planting.
5. Plant in areas safe from present and future construction activities.
6. Transplant to original depth of bury.

NOTE: Water weekly through the summer.

Plant At Depth Which Plant Was Grown.

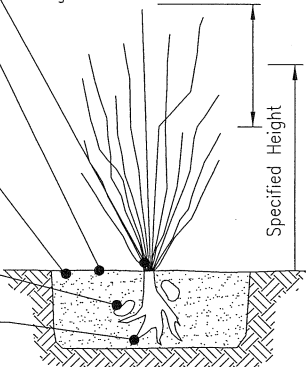
Avg. of 75% of Taller Canes

Planting Mix To Be 1/3 Golf Sand And 2/3 Specified Soil. Pack The Backfill Mix, Do Not Use Water To Settle Backfill Mix.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.

Use 6" to 8" Rocks To Anchor Roots.

Root Prune All Shredded Or Damaged Roots And Dust Entire Root Structure With Wettable Sulphur (1.5 min.) At Planting Site.



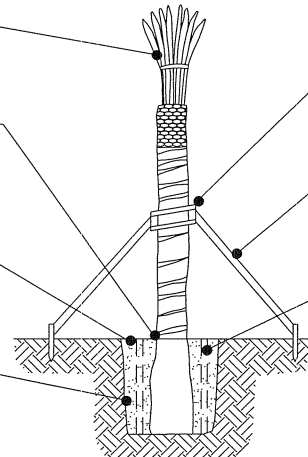
Ocotillo Planting

Thin Top Fronds, Tie With 1" Vinyl Tie (Remove Ties Prior To Buckling 60-90 Days).

Plant At Depth Which Plant Was Grown. Adjusting Root Ball Depth To Align Finished Height Will Not Be Allowed.

100% Golf Sand Backfill. Settle Backfill With Water, Do Not Pack Backfill.

Planting Hole Width Shall Be 3 Times The Diameter Of Roots And No Deeper Than The Extension Of The Roots.



2" x 4" Blocking Nailed To Brace. Tie To Trunk With 1" (Min.) Vinyl Tie.

(3) 2' x 6" Braces, Spaced Equally And Nailed To Wooden Stakes In The Ground.

4" Perforated PVC, 2 Per Tree. Wrap PVC With Soil Screen Fabric.

Palm Planting and Bracing Detail

Plant At Depth Which Plant Was Grown.

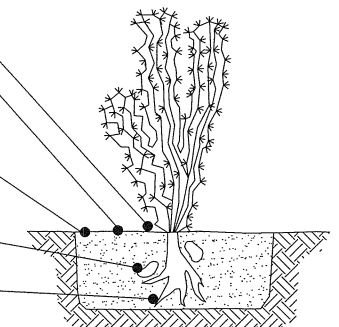
NOTES: Water weekly through the summer. Maintain original growing orientation.

Planting Mix To Be 1/3 Golf Sand And 2/3 Specified Soil. Pack The Backfill Mix, Do Not Use Water To Settle Backfill Mix.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.

Use 6" to 8" Rocks To Anchor Roots.

Root Prune All Shredded Or Damaged Roots And Dust Entire Root Structure With Wettable Sulphur (1.5 min.) At Planting Site.



Cactus Planting

DETAIL NO. G-3610-2 CITY OF GOODYEAR STANDARD DETAIL

APPROVED BY: Goodyear Standards and Policies Committee

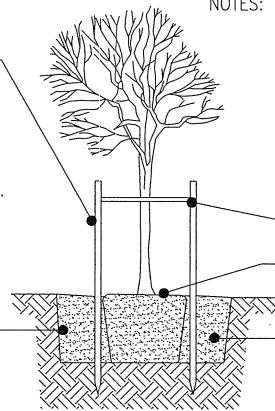
7/97

LANDSCAPE DETAILS

DETAIL NO. G-3610-2

STAKING REQUIRED FOR TREES IN 36" BOX OR LESS OR WITH A CALIPER OF LESS THAN 2" (2) 2" DIAMETER x 10' LONG LODGEPOLE PINE TREE STOKES. BURY 3' IN GROUND AND CUT OFF STAKE 12" ABOVE VINYL TIE. STAKES SHALL REMAIN IN PLACE FOR 2 YEARS UNLESS REMOVAL IS APPROVED BY MAINTENANCE DIRECTOR.

BACKFILL WITH NATIVE SOIL (NO ROCKS GREATER THAN 3") BACKFILL 3/4 THE DEPTH OF ROOTBALL BEFORE REMOVING BOX SIDE OF PANELS. COMPACT BACKFILL AS NEEDED TO PREVENT BREAKING ROOTBALL.



- NOTES: 1. SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN TREES AND UTILITY FACILITIES SO AS TO NOT HINDER USE OF THESE FACILITIES. 2. PLANT PIT BASINS WITHIN SLOPE PLANTING AREAS SHALL BE CONSTRUCTED WITH A MAX. 2:1 SLOPE. PROVIDE SMOOTH TRANSITION TO SURROUNDING FINISH GRADE.

VINYL TIE, 1" (MIN.) IN WIDTH

SET TOP OF ROOTBALL AT SOIL SURFACE.

PLANTING HOLE SHALL BE 2 TIMES DIAMETER OF ROOT BALL TIMES DIAMETER OF ROOT BALL AND NO DEEPER. SCARIFY SIDES AND BOTTOM OF PLANT HOLE.

SALVAGED TREE PLANTING

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(LEFT BLANK)

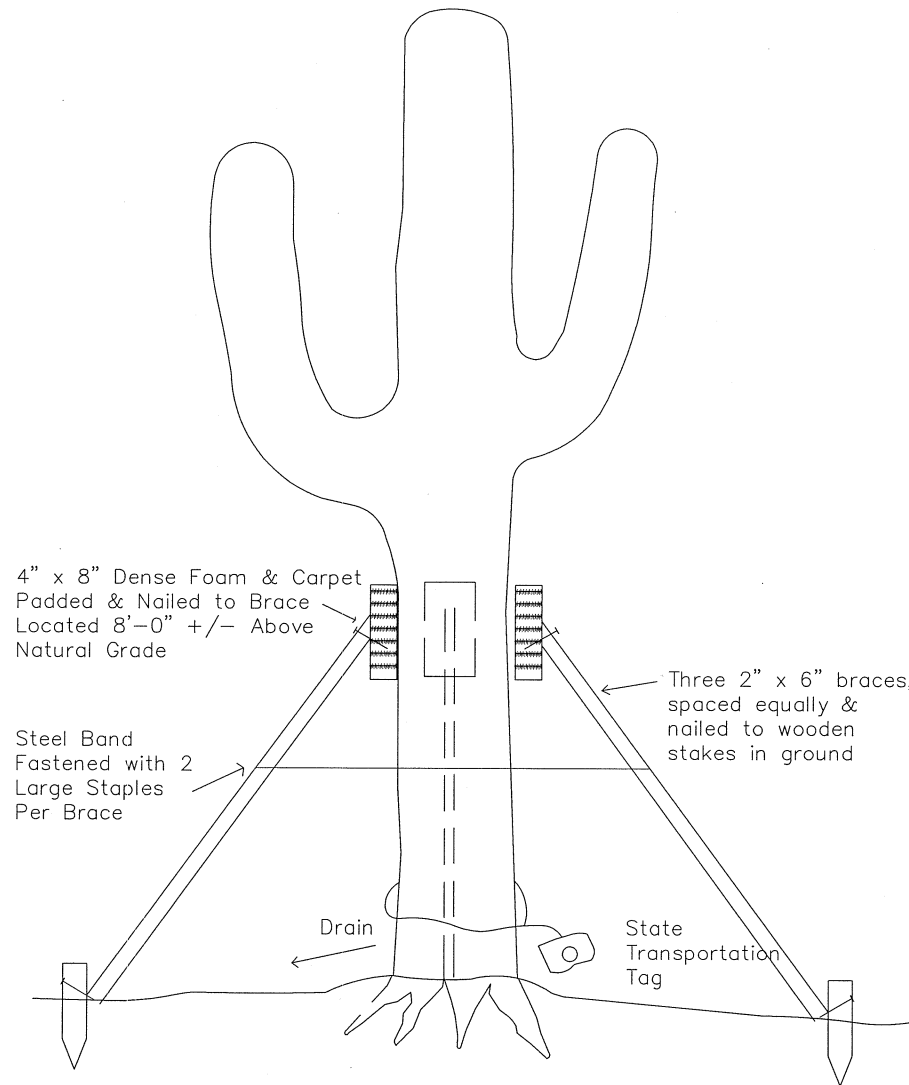
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DETAIL NO.
G-3610-3 CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

LANDSCAPE DETAILS

DETAIL NO.
G-3610-3



1. Saguaros shall be replanted on site in a place where they will be safe from present and future construction activities.
2. A rootball of 24" minimum size shall be retained during transplanting, with root length a minimum of 6" on all sides. Dust all wounds and root cuts with soils sulphur.
3. Saguaros must be transplanted with the same north orientation as they originally grew. "NORTH" to be marked on a rib at a height approximately 5' above grade.
4. Saguaros shall not be transplanted more than 1'-0" below original depth.
5. Saguaros must be watered thoroughly at the time of transplanting to remove air pockets and assure proper soil compaction. Backfill shall be free of injurious rocks and debris.
6. Saguaros over 8' in height must have bracing as per this detail.
7. Saguaros temporarily planted in a nursery must have individually prepared holes; trench planting is not acceptable.
8. A watering maintenance program must be submitted for approval prior to planting being started.
9. Any deviations from the above mentioned procedures must have written approval by a representative of the City of Goodyear.

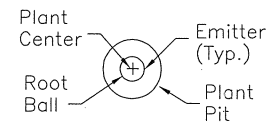
DETAIL NO.
G-3612

CITY OF GOODYEAR
STANDARD DETAIL

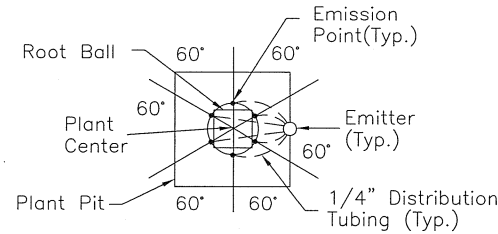
APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

PLANTING DETAILS FOR SAGUAROS

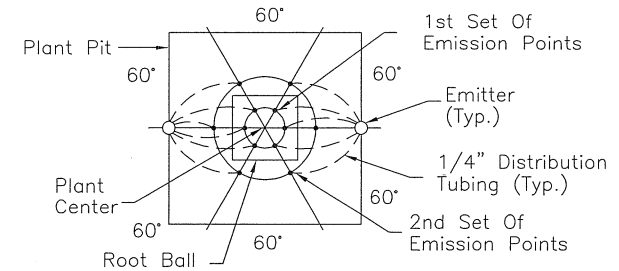
DETAIL NO.
G-3612



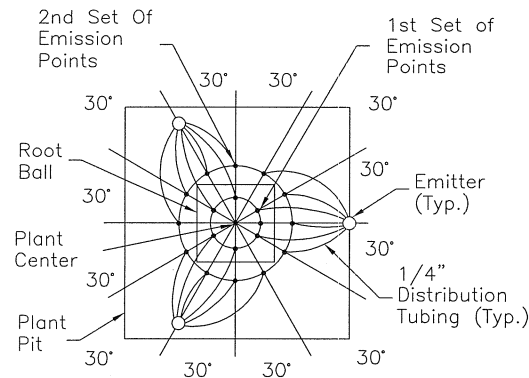
**SHRUB EMITTER
SINGLE OUTLET**



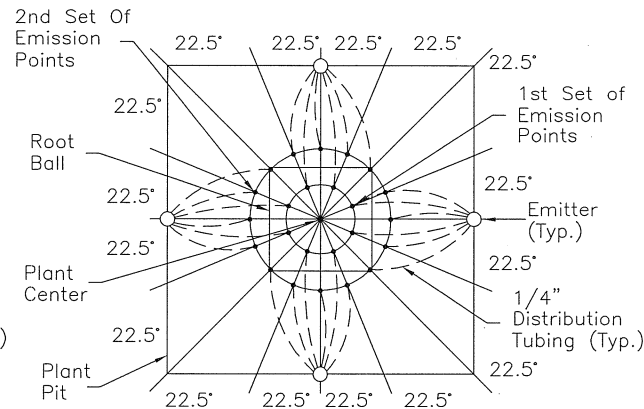
**TREE EMITTER - MULTI OUTLET
15 GAL TO 42" BOX TREES**
(SEE EMITTER SCHEDULE)



**TREE EMITTER - MULTI OUTLET
48" BOX TO 60" BOX TREES**
(SEE EMITTER SCHEDULE)



**TREE EMITTER - MULTI OUTLET
66" BOX TO 84" BOX TREES**
(SEE EMITTER SCHEDULE)



**TREE EMITTER - MULTI OUTLET
96" BOX TREES**
(SEE EMITTER SCHEDULE)

EMITTER SCHEDULE			
Tree Size	Number Of Multi Outlet Emitters— Outlet Quantity= Emitter GPH Total	Distance From Trunk	
		1st Set Emission Points	2nd Set Emission Points
15 Gal.	1-1 GPH=6 GPH	3 @ 12"	
24" Box	1-1 GPH=6 GPH	4 @ 18"	
30" Box	1-1 GPH=6 GPH	6 @ 21"	
36" Box	1-2 GPH=12 GPH	6 @ 24"	
42" Box	1-2 GPH=12 GPH	6 @ 27"	
48" Box	2-2 GPH=24 GPH	6 @ 12"	4 @ 42"
54" Box	2-2 GPH=24 GPH	6 @ 15"	5 @ 45"
60" Box	2-2 GPH=24 GPH	6 @ 18"	6 @ 48"
66" Box	3-2 GPH=36 GPH	6 @ 24"	12 @ 54"
72" Box			
78" Box	3-2 GPH=36 GPH	6 @ 30"	12 @ 60"
84" Box			
>90" Box	4-2 GPH=48 GPH	8 @ 33"	16 @ 66"

DETAIL NO.
G-3631

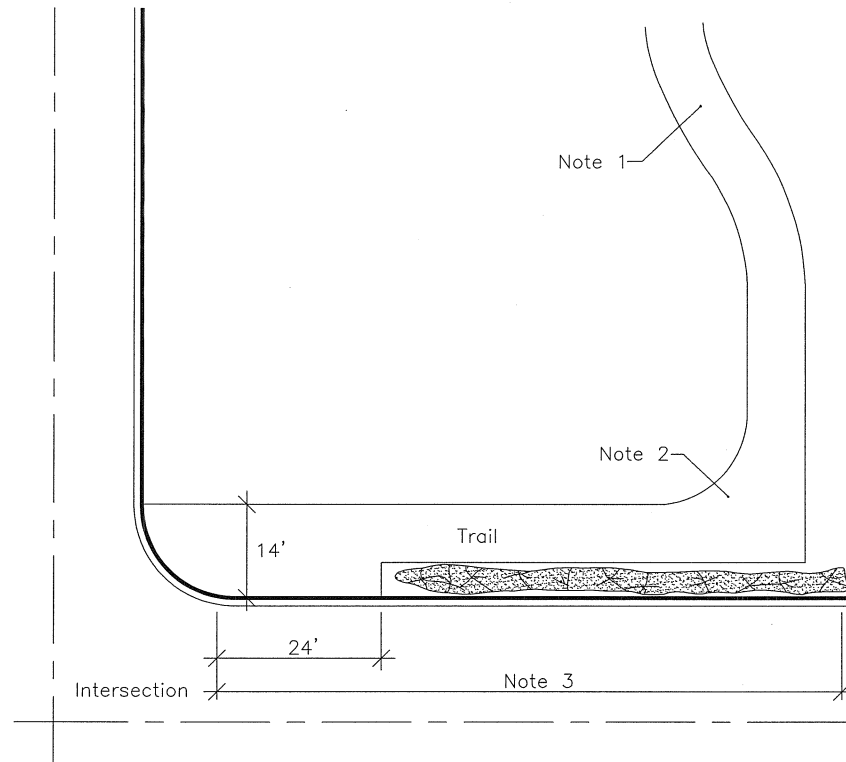
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

7/97

IRRIGATION EMITTER LAYOUT

DETAIL NO.
G-3631



1. Avoid excessive or abrupt meandering. Avoid abrupt grade changes.
2. Widen trails where sudden, sharp changes in alignment occur.
3. The maximum height of landscaping or improvements between the trail and adjacent street shall be 4', 100' from the curb return. Maintain typical sight distance standards at intersections and driveways.
4. Maximum grade shall be 12%

DETAIL NO.
G-3661

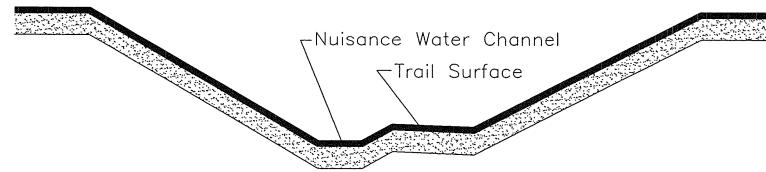
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

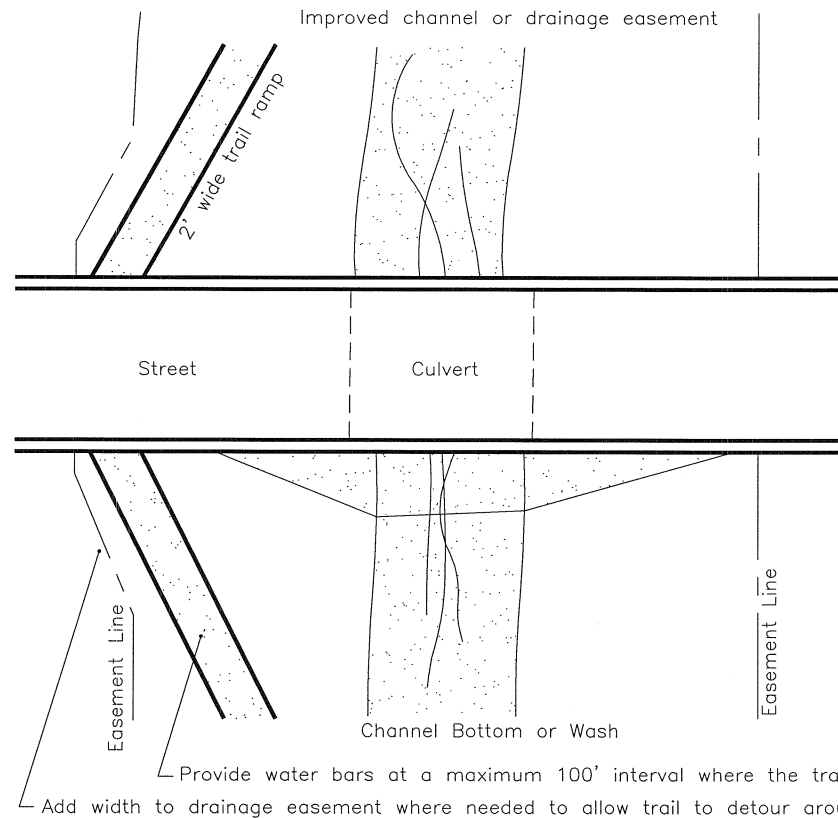
7/97

URBAN TRAIL ALIGNMENT

DETAIL NO.
G-3661



Improved Channel Section



Typical Trail Easement Plan View

DETAIL NO.
G-3662

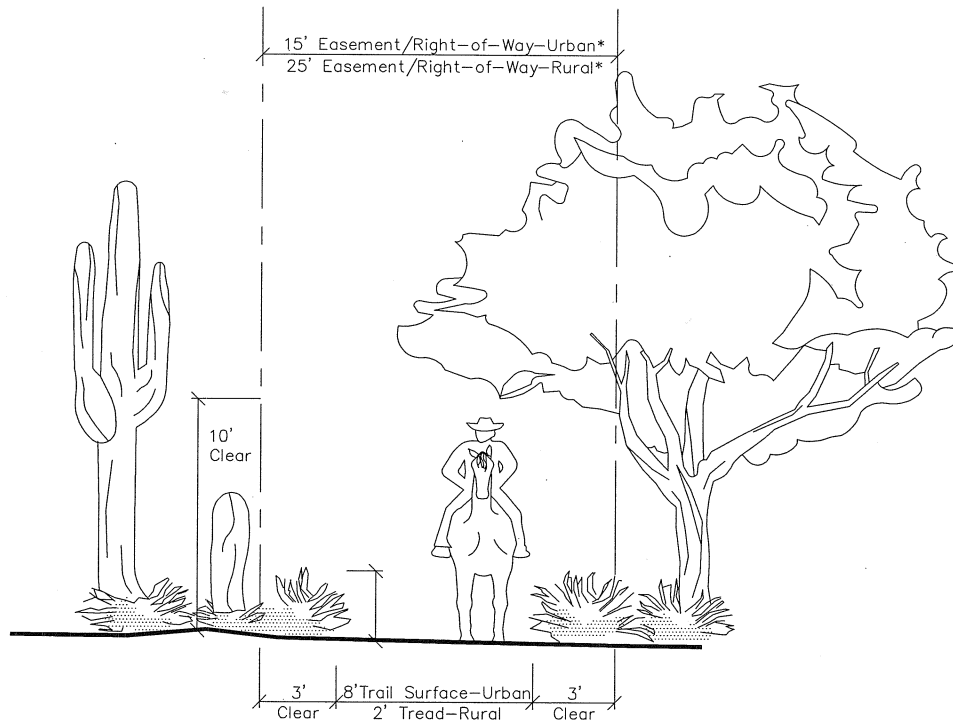
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

7/97

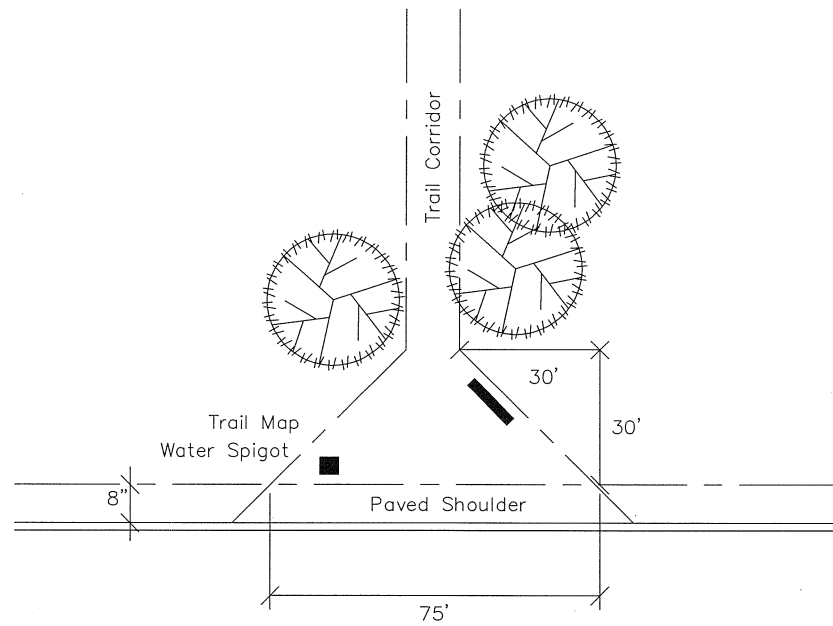
TRAILS IN DRAINAGE CHANNELS OR
DRAINAGE EASEMENTS

DETAIL NO.
G-3662



*Easement or right-of-way needed only where street right-of-way, drainage easement or open space corridor width is not adequate.

DETAIL NO. G-3665	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	MINIMUM TRAIL CLEARANCES	DETAIL NO. G-3665
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Hillside Local or Local Collector Street

DETAIL NO.
G-3671

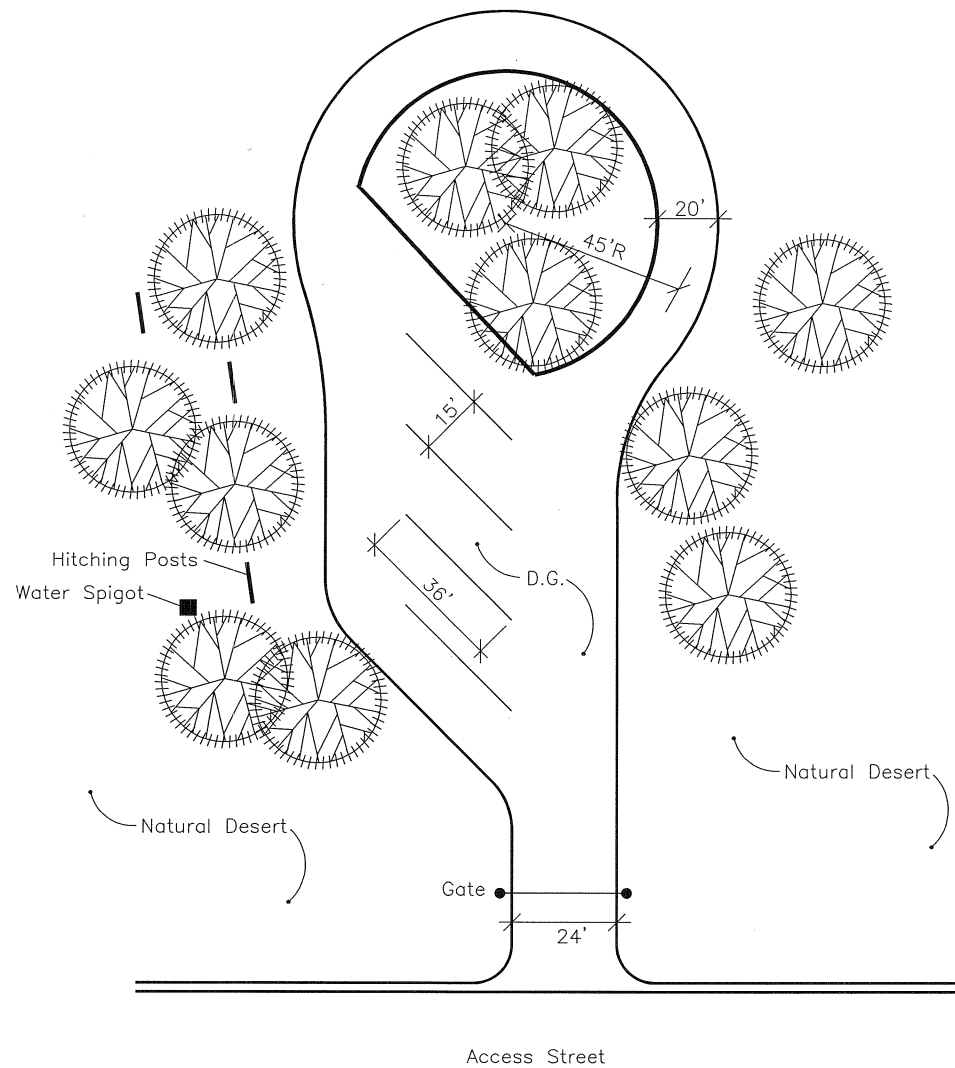
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee

7/97

HIKING TRAIL HEAD

DETAIL NO.
G-3671



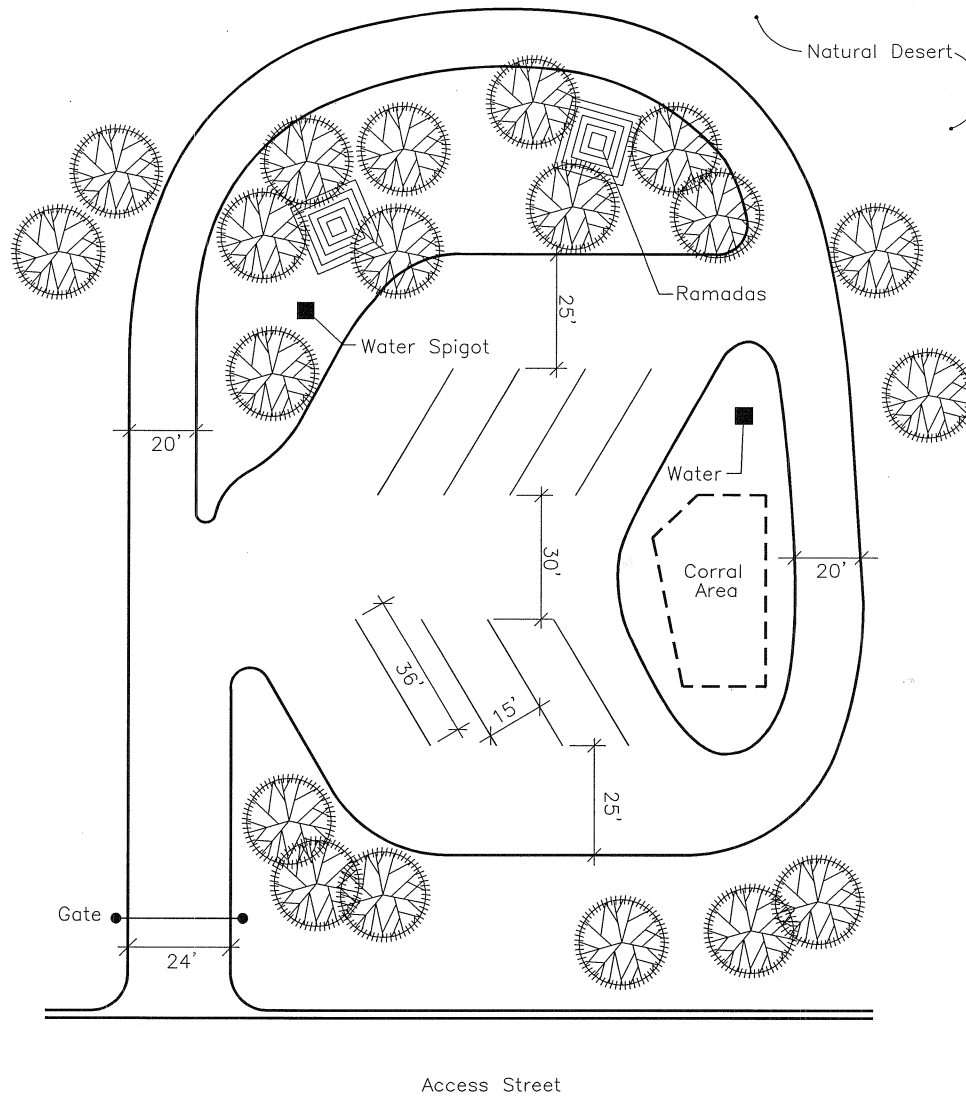
DETAIL NO.
G-3672

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

TRAIL HEAD (EQUESTRIAN SUPPORT SITE)

DETAIL NO.
G-3672



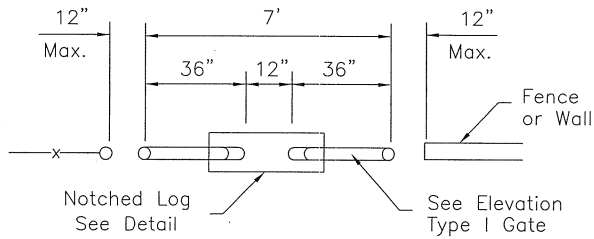
DETAIL NO.
G-3673

CITY OF GOODYEAR
STANDARD DETAIL

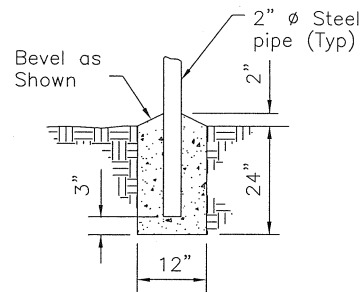
APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

MAJOR TRAIL HEAD

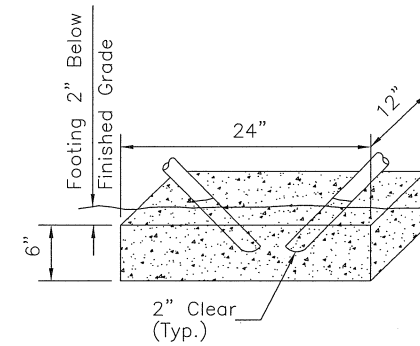
DETAIL NO.
G-3673



TYPE I GATE
w/ NOTCHED LOG



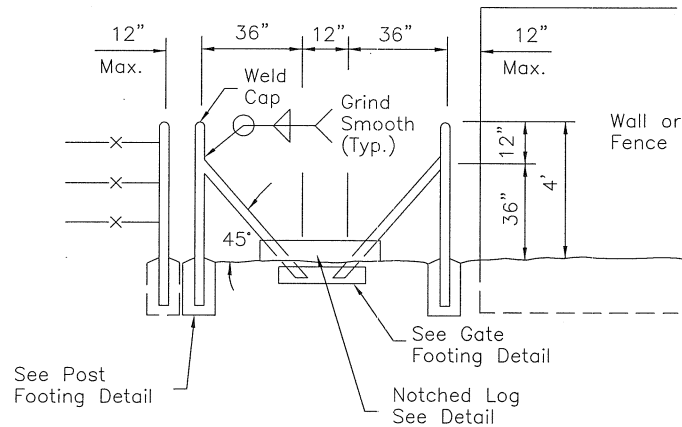
POST FOOTING
DETAIL



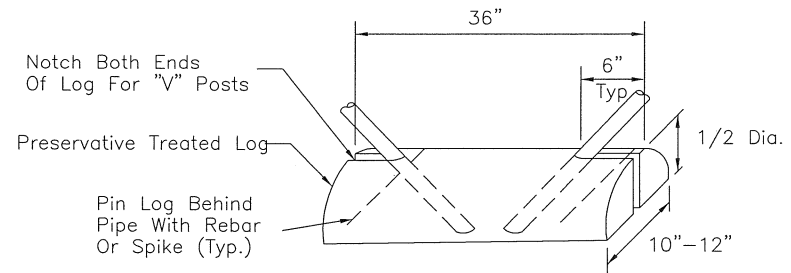
GATE FOOTING
DETAIL

NOTES

1. All Concrete Shall Be Class "B".
2. Paint Rails Per ADOT Specifications. Color Per Plans.
3. Treated Wood Per MAG Section 779.

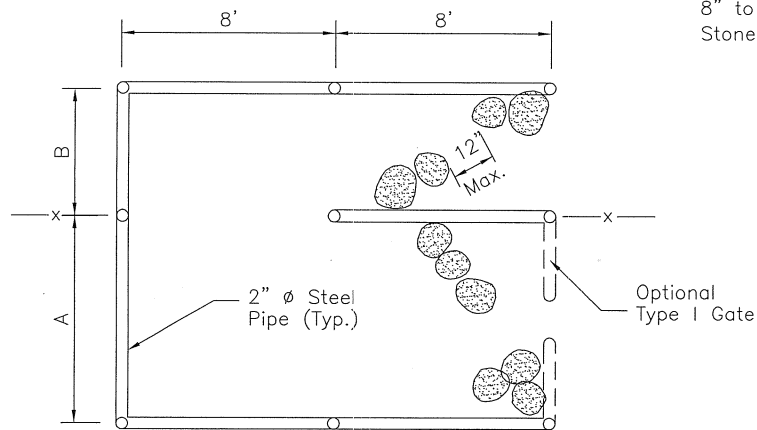


ELEVATION
TYPE I GATE

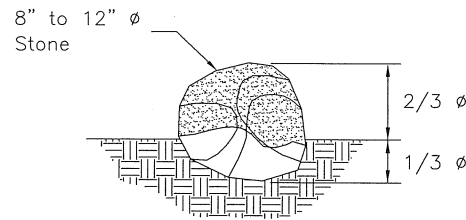


NOTCHED LOG DETAIL

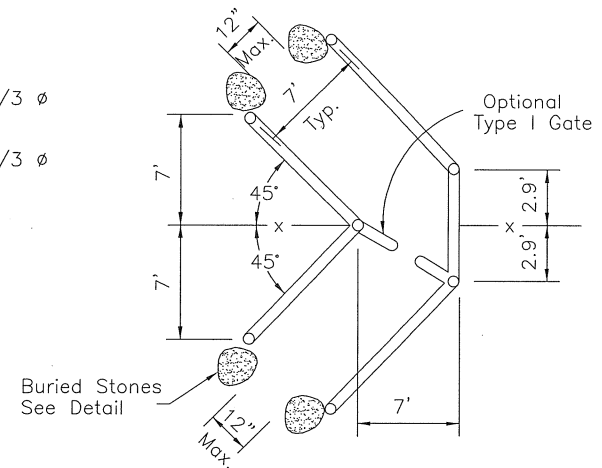
DETAIL NO. G-3680-1	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	TRAIL ACCESS GATES	DETAIL NO. G-3680-1
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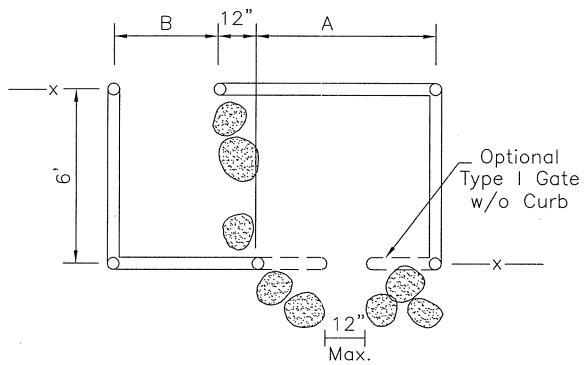
TYPE II GATE



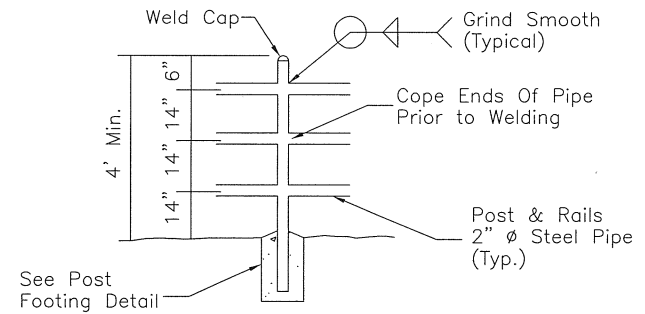
BURIED STONE
DETAIL



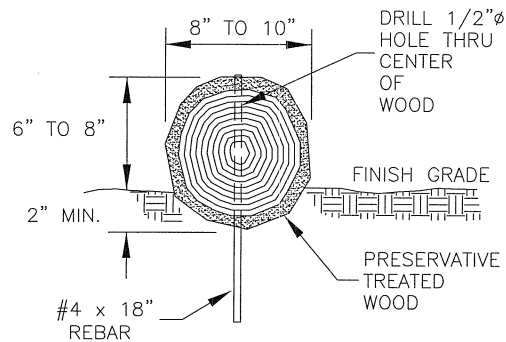
TYPE IV GATE



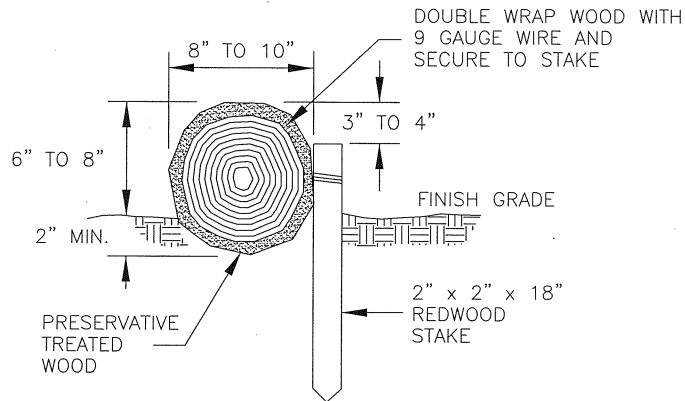
TYPE III GATE



TYPICAL RAIL ELEVATION
TYPE II, III & IV GATE



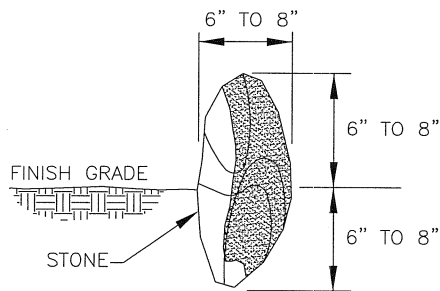
**REBAR SECURED
WOOD BARS**



**WIRE SECURED
WOOD BARS**

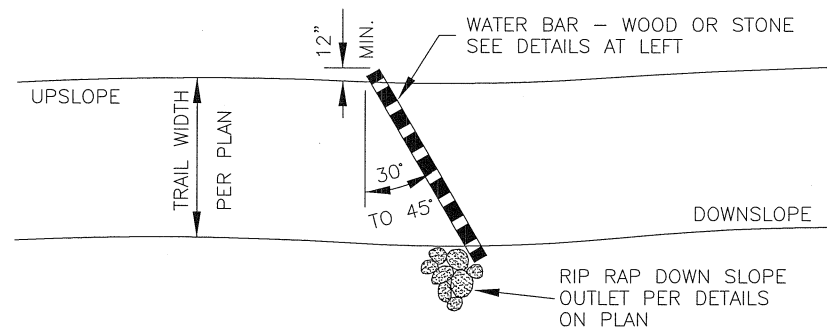
NOTES:

1. PROVIDE WATER BARS AT A MAXIMUM 100' INTERVAL WHERE TRAIL GRADE IS EQUAL TO OR GREATER THAN 6% AND AT ALL LOCATIONS AS SHOWN ON PLANS.
2. TREATED WOOD PER MAG SECTION 779.



STAGGER STONES TO PROVIDE
A CONTINUOUS WATER BAR

STONE BARS



**WIRE SECURED
WOOD BARS**

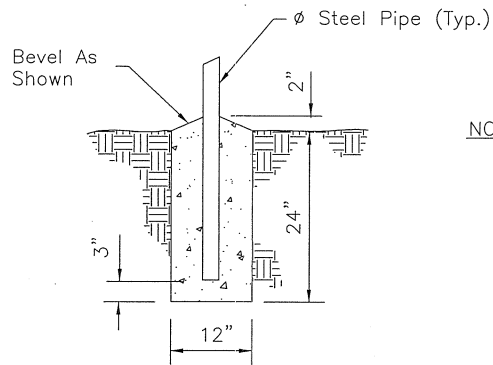
DETAIL NO.
G-3681

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

TRAIL WATER BARS

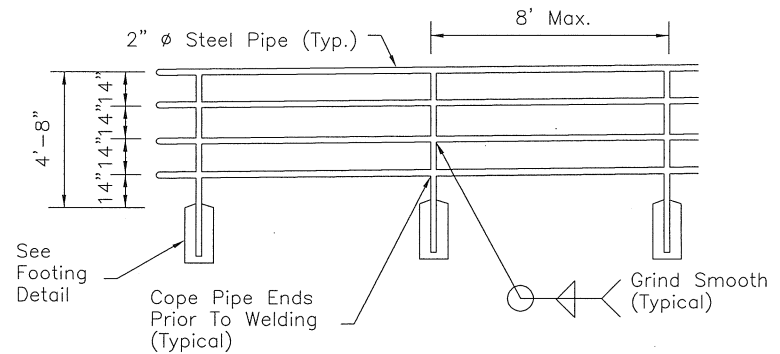
DETAIL NO.
G-3681



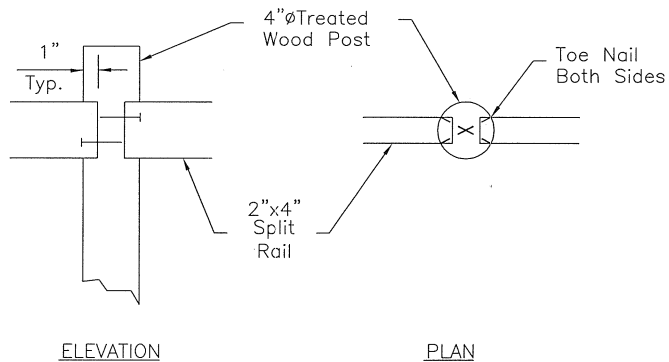
CONCRETE FOOTING DETAIL

NOTES:

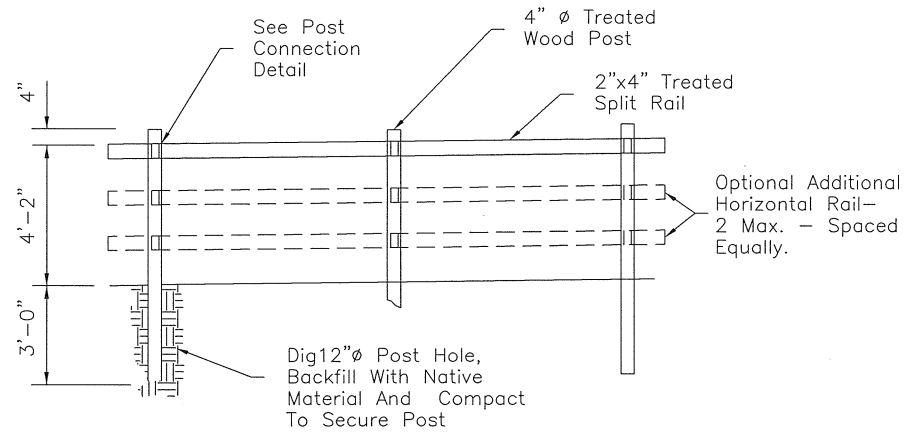
1. Paint Rails Per ADOT Specifications. Color Per Plan
2. Treated Wood Posts Per MAG Section 779.



STEEL RAIL

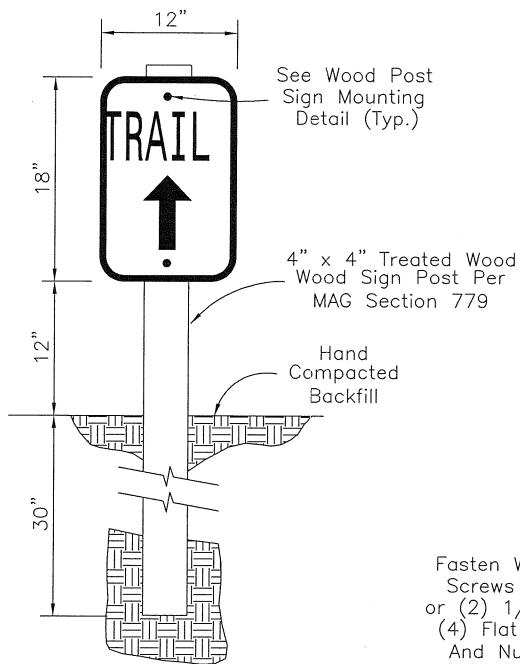


POST CONNECTION DETAIL



POST AND RAIL

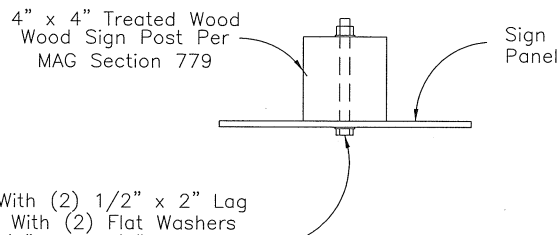
DETAIL NO. G-3682	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	TRAIL SAFETY BARRIERS	DETAIL NO. G-3682
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TRAIL MARKER

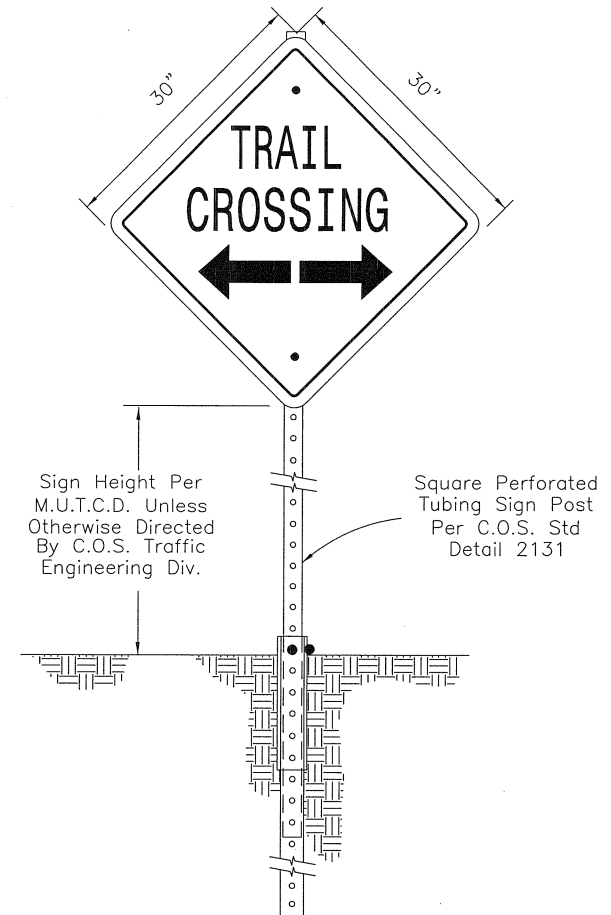
NOTES

1. Signs shall conform to C.O.S. Supplemental Specifications, Section 402.3.
2. Signs to be mounted on square perforated tubing per C.O.S. Std Det 2131 within C.O.S. Right-of-Way. Treated wood post may be used for trail markers located outside C.O.S. Right-of-Way.
3. Legends shall be reflectorized white vinyl sheeting on a green or brown vinyl background unless otherwise approved by the City of Scottsdale.



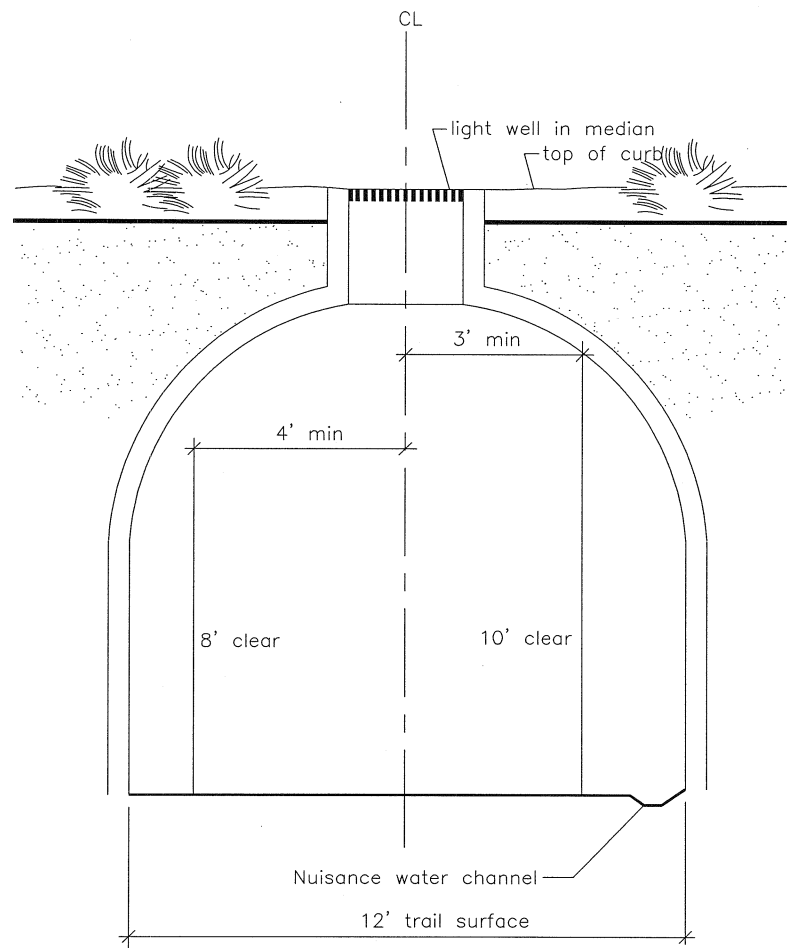
Fasten With (2) 1/2" x 2" Lag Screws With (2) Flat Washers or (2) 1/2" x 4 1/2" Bolts With (4) Flat Washers. Burr Threads And Nuts With Center Punch.

WOOD POST SIGN MOUNTING DETAIL

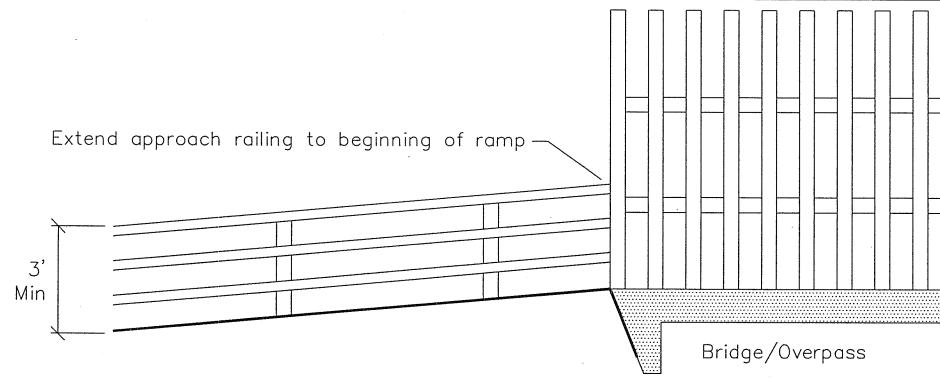


TRAIL CROSSING SIGN

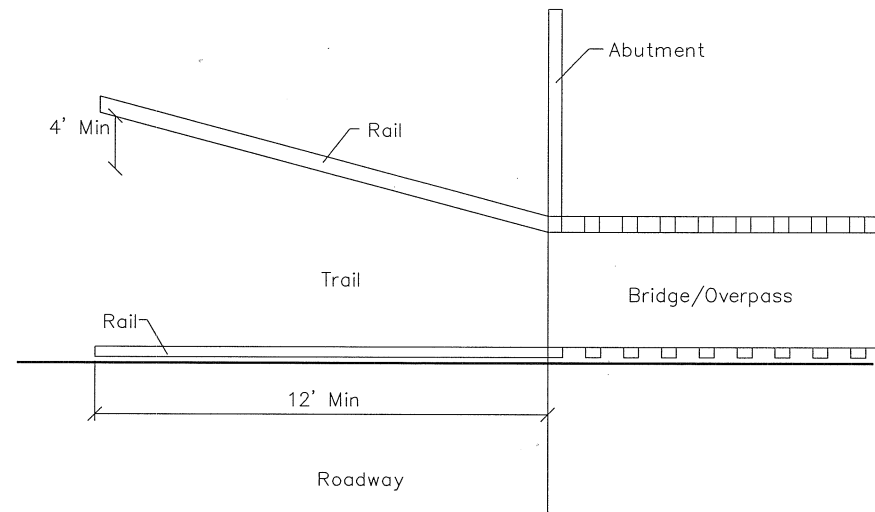
DETAIL NO. G-3683	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	TRAIL SIGNS	DETAIL NO. G-3683
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DETAIL NO. G-3690	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	TRAIL UNDERPASSES	DETAIL NO. G-3690
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Approach Elevation



Approach Plan

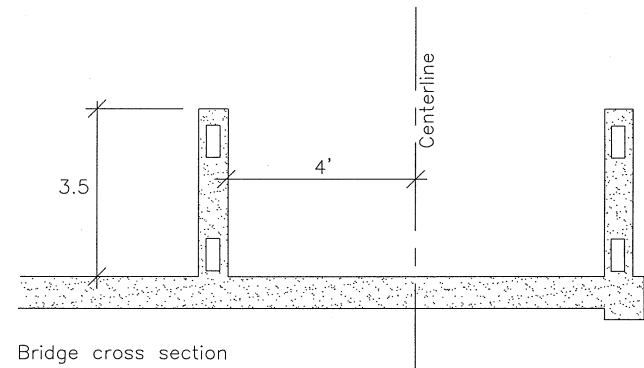
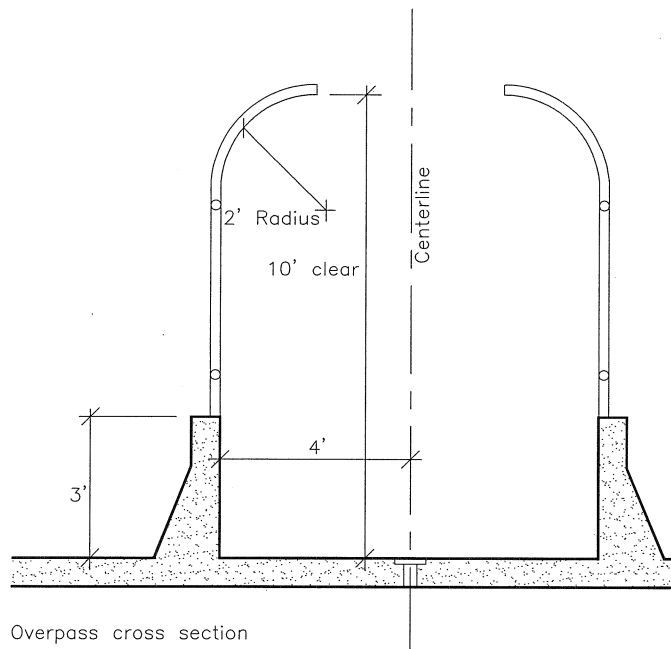
DETAIL NO.
G-3695

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED BY:
Goodyear Standards and
Policies Committee 7/97

APPROACHES TO OVERPASSES & BRIDGES

DETAIL NO.
G-3695



DETAIL NO. G-3696	CITY OF GOODYEAR STANDARD DETAIL	APPROVED BY: Goodyear Standards and Policies Committee 7/97	OVERPASSES AND BRIDGES	DETAIL NO. G-3696
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MINIMUM TREE SIZE REQUIREMENTS

Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper
ACACIA					ACACIA (Cont.)					ARGENTINE MESQUITE					VELVET ARIZONA (M)					SONORAN				
BLUE LEAF WATTLE	15	6	2	0.75	WEeping	15	5	2	0.75	(M) (PROSOPIS ALBA)	15	5	3	0.75	(PROSOPIS VELUNTINA)	15	5.5	3	0.5	(CERCIDIUM PRAECOX)	15	6	2	0.75
(ACACIA SALIGNA)	24	8	4	1.5	(ACACIA PENDULA)	24	6.5	3	1.25		24	8	5	1.25		24	7	4	1		24	7	4	1.5
	30	10	5	2		30	9	5	2		30	9	7	1.5		30	9	6	1.5		30	8	6	2
	36	12	6	2.5		36	11	6	2.5		36	11	9	2		36	10	8	2		36	10	8	2.5
BERLANDIER GUAYILLO	15	4	2	0.5	WILLOW\	15	6	2	0.75		42	13	11	2.5		42	12	10	2.5		42	11	10	3
(M) (ACACIA BERLANDIERI)	24	5	4	1	AUSTRALIAN WILLOW	24	8	4	1.5	MESQUITE (Cont.)	48	15	13	3	PALOVERDE	48	14	12	3	SONORAN (M)	48	12	12	3.5
	30	7	5	1.5	(ACACIA SALICINA)	30	10	5	2	CHILEAN MESQUITE					BLUE PALO VERDE					(CERCIDIUM PRAECOX)				
	36	9	6	2		36	14	6	2.5	(PROSOPIS CHILENSIS)	15	6	2	0.75	(CERCIDIUM FLORIDUM)	15	6	2	0.75		15	5	2	0.5
MULGA	15	5	2	0.75	IRONWOOD						24	8	4	1.5		24	7.5	4	1.5		30	8	6	1.5
(ACACIA ANEURA)	24	7	4	1.5	DESERT IRONWOOD						30	9	6	2		30	9	7	2		36	10	8	2
	30	9	6	2	(OLNEYA TESOTA)	15	3	2	0.5		36	10	8	2.5		36	10	8	2.5		42	11	10	2.5
	36	10	8	2.5		24	6	3	1.25	CHILEAN MESQUITE (M)	42	12	10	3		42	12	9	3		48	12	12	3
SHOESTRING	15	7	2.5	0.75		30	8	6	2	(PROSOPIS CHILENSIS)	48	14	12	3.5		48	14	10	3.5	OTHER TREES				
(ACACIA STENOPHYLLA)	24	9	4	1.5	DESERT IRONWOOD (M)	30	10	8	2.5		15	5	3	0.5	BLUE PALO VERDE (M)	15	5	3	0.5	AFRICAN SUMAC	15	7	2	0.75
	30	11	5	2	(OLNEYA TESOTA)	42	11	9	3		24	8	5	1	(CERCIDIUM FLORIDUM)	24	7	4	1	(RHUS LANCEA)	24	9	4	1.25
	36	13	6	2.5		48	12	10	3.5		30	9	7	1.5		30	8	6	1.5		30	11	6	2
	42	15	7	3		15	3	2	0.5	HONEY MESQUITE (M)	42	12	11	2.5		36	10	8	2		36	12	8	2.5
	48	17	8	4		24	6	3	1.25	(PROSOPIS - GLANDULOSA)	48	14	13	3		42	12	9	2.5		42	14	8	3.5
SHOESTRING (M)	15	7	2.5	0.5		30	8	6	2		15	6	2	0.75	LITTLE LEAF FOOTHILLS	15	4	2	0.5	AFRICAN SUMAC (M)	15	5	3	0.75
(ACACIA STENOPHYLLA)	24	9	4	1	MESQUITE	36	10	8	2.5	ARGENTINE MESQUITE	24	8	4	1.5	(CERCIDIUM - MICROPHYLLUM)	24	6	3	1	(RHUS LANCEA)	24	8	4.5	1
	36	13	6	2		42	11	9	3	(PROSOPIS ALBA)	30	9	6	2		30	7	5	1.5		30	9	7	1.5
SWEET	15	6	2.5	0.75		48	12	10	3.5		36	10	8	2.5		36	8	6	2		36	11	8	2
(ACACIA SMALLII)	24	8	4	1.5	ARGENTINE MESQUITE	15	6.5	2	0.75	SCREW BEAN (M)	42	12	10	3	LITTLE LEAF FOOTHILLS	15	4	3	0.5		42	13	9	2.5
	30	9	6	2	(PROSOPIS ALBA)	24	8	4	1.5	(PROSOPIS - PUBESCENS)	48	14	12	3.5	(M) (CERCIDIUM - MICROPHYLLUM M)	24	5	4	1	ALEPPO	48	16	10	3
	36	10	8	2.5		30	9	6	2		15	5.5	3	0.5		30	6	5	1.5	(PINUS HALEPENSIS)	15	6	3	0.75
	42	12	10	3		36	11	8	2.5		24	8	4	1		36	8	7	2		24	9	4	2
	48	14	12	3.5		42	13	10	3		30	9	6	1.5							30	11	6	3
SWEET (M)	15	5	3	0.5		48	15	12	3.5		36	10	8	2							36	14	7	3.5
(ACACIA SMALLII)	24	8	5	1							42	12	10	3							42	16	9	4
	30	9	7	1.5							48	14	12	3.5							48	18	10	4.5
	36	10	9	2																				
	42	12	10	2.5	See General Notes																			
	48	14	12	3	Page 3																			
DETAIL NO. 2600-1	City of Scottsdale				APPROVED BY:				MINIMUM TREE SIZE REQUIREMENTS												DETAIL NO. 2600-1			
	Standard Details																							

MINIMUM TREE SIZE REQUIREMENTS

Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	
ARIZONA ASH (FRAXINUS VELUTINA)	15	8	2	1	Canary Island Pine (Pinus Canariensis)	15	6	2	0.75	COOLIBAH (EUCALYPTUS - MICROTHECA)	15	7	3	0.75	FEATHER BUSH FERN OF THE DESERT (LYSILOMA THORNERI)	15	5	3	0.75	JACARANDA (JACARANDA ACUTIFOLIA)	15	8	2	0.75	
	24	10	4	1.5			24	9	4	2		24	10	4	1.5		24	6.5	4	1.25		24	9	4	1.5
	30	12	5	2			30	13	5	3.5		30	12	5	2		30	7	6.5	2		30	12	5	2.5
	36	14	8	2.5			36	17	5	4		36	15	6	2.5		36	8	6	2.5		36	14	8	3
	42	15	9	3			42	18	6	4.5	CORK OAK (QUERCUS SUBER)	15	4	2	0.75	FEATHER BUSH FERN OF THE DESERT(M) (LYSILOMA THORNERI)	15	4	3	0.75		42	16	8	3.5
	48	16	10	3.5		48	22	7	5.5		24	6.5	3	1.5		24	5	5	1		48	18	9	4	
ARIZONA SYCAMORE (PLATANUS WRIGHTII)	15	7	2	1	CAROB (CERATONIA SILQUA)	15	8	2	0.75		30	9	4.5	2.5		30	7	7	1.5	JACARANDA (M) (JACARANDA- ACUTIFOLIA)	15	5.5	3	0.5	
	24	9	4	1.5		24	9	4	1.5		36	12	6	3.5		36	8	8	2		24	8	5	0.75	
	30	13	6	2.5		30	10	5	2		42	14	9	4	FICUS (FICUS NITIDA)	15	8	2	0.75		30	10	6	1.5	
	36	16	8	3.5		36	12	5	3		48	16	11	4.5		24	9	4	1.5		36	12	7	2	
ARIZONA SYCAMORE(M) (PLATANUS WRIGHTII)	15	6	3	0.5	CHASTE TREE (VITEX ANGUS-CASTUS)	15	5	3	0.75	CORRAL GUM (EUCALYPTUS TORQUATA)	15	6	2.5	0.75		30	10	5	2	LEMON BOTTLE BRUSH (CALLISTEMON CITRINUS)	15	8	2	0.75	
	24	8	4	1		24	6	4	1.25		24	8	3.5	1.25		36	12	6	3		24	9	4	1.25	
	30	12	7	2		30	7	5	2	DESERT WILLOW (CHILOPSIS LINEARIS)	15	6	2	0.75	FICUS (FICUS NITIDA M)	15	5.5	3	0.5		30	10	5	2	
	36	15	9	3		36	8	6	2.5		24	7	4	1.25		24	8	4	1		36	12	6	2.75	
AUSTRALIAN WILLOW WILGA (GEIJERA PARVIFLORA)	15	5	3	0.75	CHINESE EVERGREEN ELM (ULMUS PARVIFOLIA)	15	7	2	0.75		30	9	6	1.75		30	10	6	2	MEDITERANEAN FAN PALM (CHAMAEROPS HUMULIS)	15	2	2	N/A	
	24	8	4	1.25		24	8	3	1.25	DESERT WILLOW (M) (CHILOPSIS LINEARIS)	15	5	3	0.75	FLOODED GUM (EUCALYPTUS RUDIS)	15	8	3	1		24	3	3	N/A	
	30	10	5	2		30	12	6	2		24	7	5	1		24	10	4	1.5		30	4	4	N/A	
	36	12	5.5	2.5		36	14	8	2.5		30	9	6	1.5	FLOWERING CHERRY (PRUNUS VARIETIES)	15	6	2.5	0.75	MESCAL BEAN TEXAS MOUNTAIN LAUREL (SOPHORA - SECUNDIFLORA)	15	3	1	0.75	
BOTTLE TREE (BRACHYCHITON - POPULNEUS)	15	6	2	1.5		42	16	9	3.5		36	10	8	2		24	9	4	1.25		24	4	2	1	
	24	9	4	2.5		48	18	10	3.75	ELDARICA (PINUS ELDARICA)	15	6	2	1.5		30	11	8	2		30	5	3	1.75	
	30	12	5	4	CHINESE PISTACHE (PISTACIA CHINENSIS)	15	7	2	0.75		24	10	4	2		36	13	10	2.5		36	6	4	2	
	36	15	6	5		24	9	4	1.5		30	13	4	3		42	15	11	3	MESCAL BEAN TEXAS MOUNTAIN LAUREL (M) (SOPHORA - SECUNDIFLORA)	15	3	2	0.75	
	42	17	8	6		30	10	5	2.5		36	15	5	4		48	17	12	3.5		24	4	3	1	
	48	20	9	6.5		36	12	6	3.5		42	18	7	4.5	HONEY LOCUST (GLEDITSIA TRIACANTHOS INERMIS)	15	8	2	0.75		30	5	4	1.5	
BRAZILIAN PEPPER (SCHINUS - TEREBINTHIFOLIA)	15	8	2	0.75	CHIR PINEL INDIAN LONG LEAF (PINUS ROXBURGHII)	15	5	3	1		48	20	9	5.5		24	9	4	1.5	MEXICAN PALO VERDE JERUSALEM (PARKINSONIA ACULEATA)	15	7	3	1	
	24	9	4	1.25		24	8	4	2	EVERGREEN PEAR (PYRUS KAWAKAMI)	15	7	2	0.75		30	10	6	2		24	9	6	1.5	
	30	10	5	2.5		30	11	6	2.5		24	9	4	1.5		36	12	8	2.5		30	11	9	2.5	
	36	12	8	3		36	15	6.5	3.5		42	17	8	4.5		42	14	10	3		36	12	10	3	
CALIFORNIA PEPPER (SCHINUS MOLLE)	15	7	2	0.75	See General Notes Page 3	42	17	8	4.5		48	20	9	5		48	16	12	3.5						
	24	8	4	1.25																					
	30	10	6	2.5																					
	36	12	8	3																					
DETAIL NO.		City of Scottsdale			APPROVED BY:																	DETAIL NO.			
2600-2		Standard Details					MINIMUM TREE SIZE REQUIREMENTS															2600-2			

MINIMUM TREE SIZE REQUIREMENTS

Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper	Name	Size	Height	Width	Caliper				
MODESTO ASH (FRAXINUS V MODESTO)	15	8	2	1	RAYWOOD ASH	15	8	4	1	SILK TREE MIMOSA (M) (ALBIZIA JULIBRISSIA)	15	5	3.5	0.5	SILK TREE MIMOSA (ALBISIA JULIBRISSIN)	15	6	3	0.75				
	24	10	4	1.5	CLARET ASH	24	10	3	1.5		24	6.5	5	0.75		24	8	4	1.5				
	30	12	6	2	(FRAXINUS O RAYWOODII)	30	12	5	2		30	6	6	1		30	10	6	2				
	36	14	7	2.5		36	14	8	2.5	36	10	8	2.5	36	12	8	3						
	42	16	8	3		42	16	10	3	SILVER DOLLAR GUM	15	7	3	0.75	TEXAS EBONY (M) (PITHECELLUBIUM- FLEXICAULE)	15	4	2	0.5				
48	17	10	3.5		48	18	12	4	(EUCALYPTUS- POLYANTHEMOS)	24	10	4	1.5	24		6	4	1					
NARROW LEAF GIMLET	15	6	2.5	0.75	RED CAP GUM	15	6.5	2.4	0.75					30		7	6	1.5					
SWAMP MALLET (EUCALYPTUS - SPATHULATA)	24	8	3	1	(EUCALYPTUS- ERYTHROCORYES)	24	8	4	1.25	SISSOO (DALBERGIA SISSOO)	15	7	3	0.75		36	9	8	2				
					RED GUM	15	8	3	1		24	10	4	1.25	42	10	10	2.5					
OLEANDER (NERIUM OLEANDER)					(EUCALYPTUS- CAMALDULENSIS)	24	10	4	1.75			30	12	7	2.5		48	11	11	3			
	15	7	2	0.75						SOUTHERN LIVE OAK	36	15	10	3	WEeping BOTTLE	15	8	2	0.75				
	24	9	4	1.25	RED IRON BARK	15	8	3	0.75	HERITAGE	24	9	4	1.25	(CALLISTEMON VIMINALIS)	24	10	3.5	1.5				
OLIVE TREE (OLEA EUROPAEA)	30	10	5	2	(EUCALYPTUS - SIDEROXYLON)	24	10	4	1.5	(QUERCUS VIRGINIANA)	30	11	6.5	2		30	12	5	2				
	36	12	6	2.5							30	11	6.5	2		36	14	7	2.5				
	15	5	3	0.5	RIO GRANDE FAN	15	7	2	0.75		36	13	8	2.75	WEeping WILLOW	15	8	2	1				
	24	8	5.5	1.5	TEXAS ASH	24	9	4	1.25		42	15	10	3.5	(SALIX BABYLONICA)	24	10	4	1.5				
	30	11	9	2	(FRAXINUS V FANTEX)	30	12	5	2	TEXAS EBONY	48	17	12	4.5		30	12	6	2.5				
ORCHID TREE (BAUHINIA)	36	12	10	3		30	12	5	2	(PITHECELLBIUM- FLEXICAULE)	15	5	2	0.75		36	14	8	4				
	42	14	12	3.5		36	14	8	2.5		24	6	3	1.5	WHITE IRON BARK	15	6.5	2.5	0.75				
	48	16	14	4		42	15	9	3.5		30	7	4	2	(EUCALYPTUS - LEUCOXYLON)	24	8	3.5	1.25				
	15	8	2	0.75		48	16	10	4		36	9	6	2.5									
	24	9	4	1.25	SHAMEL EVERGREEN	15	8	2	1		42	10	6	3	YELLOW OLEANDER	15	6	2	0.5				
ORNAMENTAL PEAR (PYRUS CALLERYANA)	30	11	6	2	(FRAXINUS UHDEI)	24	10	4	1.5		48	11	7	3.5	(THEVETIA PERUVIANA)	24	8	4	1.25				
	36	13	7	2.5		30	12	5	2.5					YELLOW OLEANDER(M)	15	4	3.5	0.5					
	15	7	2	1		36	14	8	3					(THEVETIA PERUVIANA)	24	6	5	0.75					
	24	10	3.5	1.5		42	15	9	3.5														
	30	12	6	2.5		48	16	10	4														
	36	14	8	3	SILK OAK	15	8	3	1	GENERAL NOTES: 1. All trees shall be guaranteed for one year from the date of acceptance 2. "M" designates a multitrunk tree. A multitrunk tree is a tree with more than one main trunk. 3. Caliper is measured at 12" above the ground for trees with caliper greater than 4". For multitrunk trees, and trees with caliper of less than 4", the caliper is measured 6" above the ground. 4. Size is listed as the box size in inches except for those trees in 15 gallon containers.													
	42	16	10	3.5	(GREVILLEA ROBUSTA)	24	10	4	2														
	48	18	12	4		30	12	6	2.5														
						36	14	7	3														

Prune Tree At Time Of Stake Removal.

(2) 2" Diameter x 10' Long Lodgepole Pine Tree Stakes. Bury 3' In Ground And Cut Off Stake 12" Above Vinyl Tie. Stakes Shall Remain In Place For 2 Years Unless Removal Is Approved By Maintenance Director.

Mulch To A Depth Of 1/2", 5' In Diameter. Keep Mulch 6" Away From Trunk.

Backfill With Native Soil. (No Rocks Greater Than 1") Apply Fertilizer To Surface Away From Trunk Per Specifications.

Scarify One Side Of Root Ball Prior To Planting

Note: Sufficient clearance shall be maintained between trees and utility facilities so as to not hinder use of these facilities.

Vinyl Tie, 1" (Min.) In Width

Set Top Of Root Ball At Soil Surface.

Form Temporary Irrigation Border Just Outside Of Root Ball. Use Water To Settle Backfill. Do Not Pack Backfill.

Planting Hole Shall Be 3 Times Diameter Of Root Ball And No Deeper. Scarify Sides And Bottom Of Planting Hole

Tree Planting and Staking ≤36" Box Or 2" Caliper

Note: Sufficient clearance shall be maintained between shrubs and utility facilities so as to not hinder use of these facilities.

Mulch Soil To A Depth Of 2", 2' In Diameter For 1 Gal. Shrubs, 4' In Diameter For 5 Gal. Shrubs, Keep Mulch 4" Away From Plant Base.

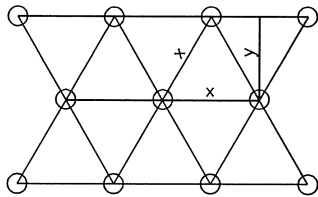
Backfill With Native Soil. Apply Fertilizer To Surface Away From Trunk Per Specifications.

Set Top Of Root Ball At Soil Surface.

Planting Hole Shall Be 3 Times Diameter Of Root Ball And No Deeper. Scarify Sides And Bottom Of Planting Hole

Scarify One Side Of Root Ball Prior To Planting

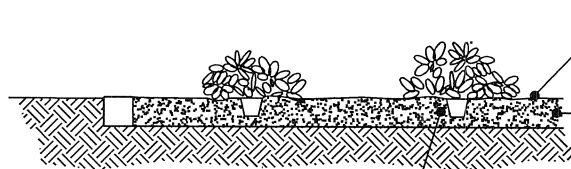
Shrub Planting



All Groundcovers To Be Planted On Center (See Plant Legend) In A Triangular Pattern.

X = O.C. Dimension As Noted On Plan

Y = 0.86 Of Dimension "X"

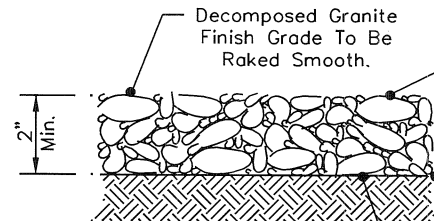


Mulch Soil To A Depth Of 2", 1' In Diameter. Keep Mulch 2" Away From Plant Base.

Prepare Soil Per Specifications And Rototill To A Depth Of 6" Prior To Any Sprinkler Work.

Backfill With Native Soil. Apply Fertilizer To Surface Away From Trunk Per Specifications.

Groundcovers



Provide Final Application Of Weed Control Upon Final Raking.

Fine Graded Subgrade

Apply Pre-Emergent Herbicide As Per Manufacturers Recommendations. (Surflan Or Equal Approved By City Of Scottsdale)

Decomposed Granite

DETAIL NO.
2620-1

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

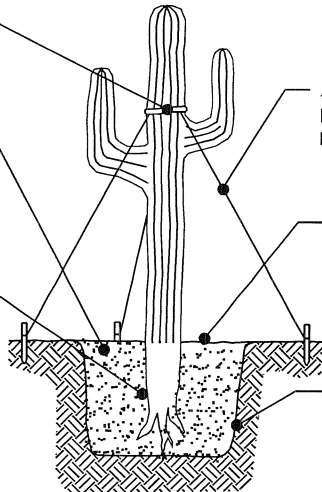
LANDSCAPE DETAILS

DETAIL NO.
2620-1

Garden Hose Reinforced With Wire (Metal).

Use Golf Sand Or 1/4" Minus Decomposed Granite To Backfill Planting Hole. Backfill 1/2 Of Pit, Then Compact.

Root Prune All Shredded Or Damaged Roots And Dust Entire Root Structure With Wettable Sulphur (1.5 Min.) And Streptomycin Spray At Planting Site. Root Ball Minimum Size Shall Be 24" With A Minimum Root Length Of 6" On All Sides.



3 Tree Braces, Spaced Equally. Braces To Remain In Place For One Year Min.

6 - 1 Gallon Emitters In 'Hula Hoop' Distribution, Run Once A Month 24 To 48 Hours For One Year.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.

Saguaro Planting Type A

NOTES:

1. Optimum transplanting season is October thru November.
2. Maintain original plant orientation. The original "North" orientation shall be marked on a rib at a height of 5' above ground level.
3. Water thoroughly at the time of transplanting to remove air pockets and assure proper compaction. Backfill shall be free of injurious rocks and debris.
4. Do not water for 3 weeks after planting.
5. Plant in areas safe from present and future construction activities.
6. Transplant to original depth of bury.

NOTE: Water weekly through the summer.

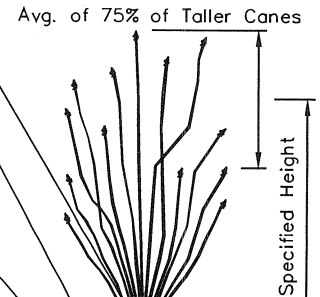
Plant At Depth Which Plant Was Grown.

Planting Mix To Be 1/3 Golf Sand And 2/3 Specified Soil. Pack The Backfill Mix, Do Not Use Water To Settle Backfill Mix.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.

Use 6" to 8" Rocks To Anchor Roots.

Root Prune All Shredded Or Damaged Roots And Dust Entire Root Structure With Wettable Sulphur (1.5 min.) At Planting Site.

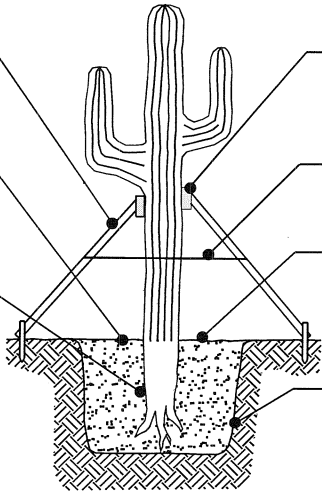


Ocotillo Planting

(3) 2"x 6" Braces, Spaced Equally And Nailed To Wooden Stakes In The Ground. Braces To Remain In Place For One Year Min.

Use Golf Sand Or 1/4" Minus Decomposed Granite To Backfill Planting Hole. Backfill 1/2 Of Pit, Then Compact.

Root Prune All Shredded Or Damaged Roots And Dust Entire Root Structure With Wettable Sulphur (1.5 Min.) And Streptomycin Spray At Planting Site. Root Ball Minimum Size Shall Be 24" With A Minimum Root Length Of 6" On All Sides.



4"x 8"- Dense Foam And Carpet Padded, 8' Above Natural Grade And Nailed To Brace.

Steel Band Fastened With 2 Large Staples Per Brace.

6 - 1 Gallon Emitters In 'Hula Hoop' Distribution, Run Once A Month 24 To 48 Hours For One Year.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.

Saguaro Planting Type B

NOTES:

1. Optimum transplanting season is October thru November.
2. Maintain original plant orientation. The original "North" orientation shall be marked on a rib at a height of 5' above ground level.
3. Water thoroughly at the time of transplanting to remove air pockets and assure proper compaction. Backfill shall be free of injurious rocks and debris.
4. Do not water for 3 weeks after planting.
5. Plant in areas safe from present and future construction activities.
6. Transplant to original depth of bury.

NOTES: Water weekly through the summer. Maintain original growing orientation.

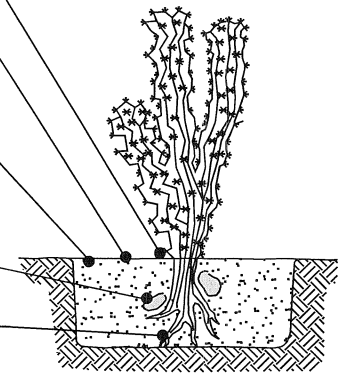
Plant At Depth Which Plant Was Grown.

Planting Mix To Be 1/3 Golf Sand And 2/3 Specified Soil. Pack The Backfill Mix, Do Not Use Water To Settle Backfill Mix.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.

Use 6" to 8" Rocks To Anchor Roots.

Root Prune All Shredded Or Damaged Roots And Dust Entire Root Structure With Wettable Sulphur (1.5 min.) At Planting Site.



Cactus Planting

DETAIL NO.

2620-2

City of Scottsdale
Standard Details

APPROVED BY:

Scottsdale Standards & Specifications Committee

LANDSCAPE DETAILS

DETAIL NO.

2620-2

Staking Required For Trees In 36" Box Or Less Or With A Caliper Of Less Than 2". (2) 2" Diameter x 10' Long Lodgepole Pine Tree Stakes. Bury 3' In Ground And Cut Off Stake 12" Above Vinyl Tie. Stakes Shall Remain In Place For 2 Years Unless Removal Is Approved By Maintenance Director.

Backfill With Native Soil. (No Rocks Greater Than 3") Backfill 3/4 The depth Of Rootball Before Removing Box Side Panels. Compact Backfill As Needed To Prevent Breaking Rootball.



- Notes: 1. Sufficient clearance shall be maintained between trees and utility facilities so as to not hinder use of these facilities.
2. Plant pit basins within sloped planting areas shall be constructed with a max. 2:1 slope. Provide smooth transition to surrounding finish grade.

Vinyl Tie, 1" (Min.) In Width

Set Top Of Root Ball At Soil Surface.

Planting Hole Shall Be 2 Times Diameter Of Root Ball And No Deeper. Scarify Sides And Bottom Of Planting Hole

Salvaged Tree Planting

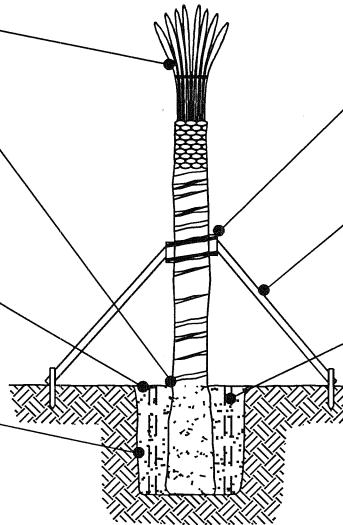
(LEFT BLANK)

Thin Top 6-8 Fronds, Tie With Natural Fiber Twine. (Remove Ties Prior To Buckling 60-90 Days).

Plant At Depth Which Plant Was Grown. Adjusting Root Ball Depth To Align Finished Height Will Not Be Allowed.

100% Golf Sand Backfill. Settle Backfill With Water, Do Not Pack Backfill.

Planting Hole Width Shall Be 3 Times Diameter Of Roots And No Deeper Than The Extension Of The Roots.



2"x 4" Blocking Nailed To Brace. Tie To Trunk With 1" (Min.) Vinyl Tie.

(3) 2"x 6" Braces, Spaced Equally And Nailed To Wooden Stakes In The Ground.

4" Perforated PVC, 2 Per Tree. Wrap PVC With Soil Screen Fabric.

Palm Planting and Bracing Detail

(LEFT BLANK)

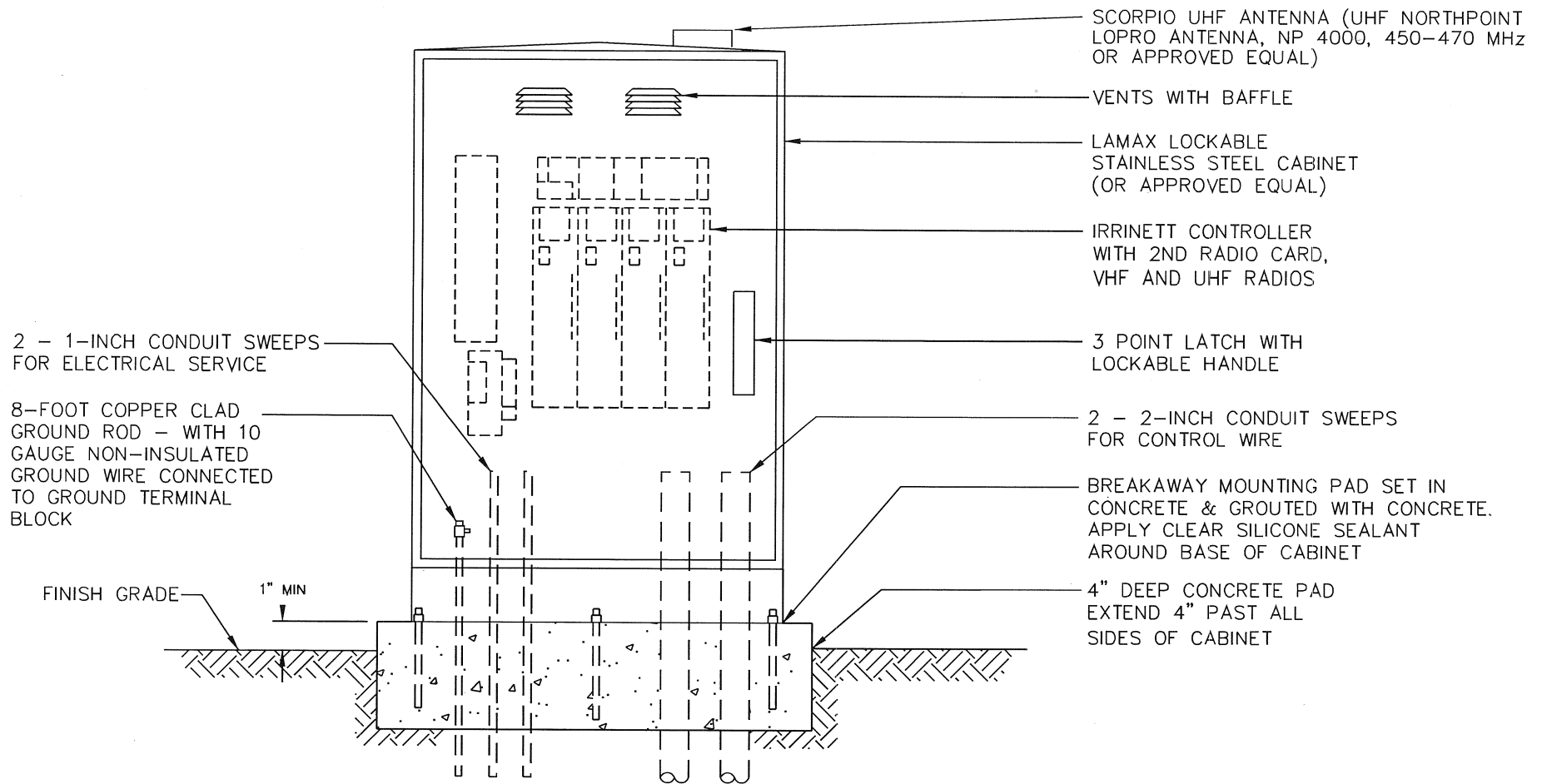
DETAIL NO.
2620-3

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

LANDSCAPE DETAILS

DETAIL NO.
2620-3



NOTES:

1. POWER SOURCE FOR CONTROLLER TO BE HARD WIRED FROM CIRCUIT BREAKER MOUNTED INSIDE CABINET TO CONTROLLER.
2. LOCATION OF POWER SOURCE TO BE NOTED ON CIRCUIT BREAKER PANEL.
3. PROGRAMMING KEYPAD TO BE SUPPLIED WITH CONTROLLER.
4. CONTROLLER TO BE LOCATED IN AREA WITH POSITIVE DRAINAGE.
5. INSTALL ONLY ONE CONTROL VALVE WIRE PER CONTROLLER OUTPUT.
6. VHF AND UHF RADIOS TO BE TUNED TO C.O.S. FREQUENCIES. CONTACT IRRIGATION DEPARTMENT FOR INFORMATION (480-312-2189)

DETAIL NO.
2631

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

IRRINET PEDESTAL MOUNTED CONTROLLER

DETAIL NO.
2631

SCORPIO UHF ANTENNA (UHF NORTHPOINT
LOPRO ANTENNA, NP 4000, 450-470 MHz
OR APPROVED EQUAL)

2 - 1-INCH CONDUIT SWEEPS
FOR ELECTRICAL SERVICE

8-FOOT COPPER CLAD
GROUND ROD - WITH 10
GAUGE NON-INSULATED
GROUND WIRE CONNECTED
TO GROUND TERMINAL
BLOCK

FINISH GRADE

1" MIN

VENTS WITH BAFFLE

LAMAX LOCKABLE
STAINLESS STEEL CABINET
(OR APPROVED EQUAL)

3 POINT LATCH WITH
LOCKABLE HANDLE

2 - 2-INCH CONDUIT SWEEPS
FOR CONTROL WIRE

BREAKAWAY MOUNTING PAD SET IN
CONCRETE & GROUTED WITH CONCRETE.
APPLY CLEAR SILICONE SEALANT
AROUND BASE OF CABINET

4" DEEP CONCRETE PAD
EXTEND 4" PAST ALL
SIDES OF CABINET

NOTES:

1. POWER SOURCE FOR CONTROLLER TO BE HARD WIRED FROM CIRCUIT BREAKER MOUNTED INSIDE CABINET TO CONTROLLER.
2. LOCATION OF POWER SOURCE TO BE NOTED ON CIRCUIT BREAKER PANEL.
3. REMOTE CONTROL VALVES FOR D.C. SCORPIO APPLICATIONS MUST HAVE D.C. LATCHING SOLENOIDS AND APPROVED SOLAR PANEL FOR POWER SOURCE.
4. JSLM NARROW BAND RADIO # 2845 G TO BE INSTALLED WITH SCORPIO CONTROLLER.
5. PROGRAMMING KEYPAD TO BE SUPPLIED WITH CONTROLLER.
6. CONTROLLER TO BE LOCATED IN AREA WITH POSITIVE DRAINAGE.
7. INSTALL ONLY ONE CONTROL VALVE WIRE PER CONTROLLER OUTPUT.
8. UHF RADIO TO BE TUNED TO C.O.S. FREQUENCIES. CONTACT IRRIGATION DEPARTMENT FOR INFORMATION (480-312-2189)

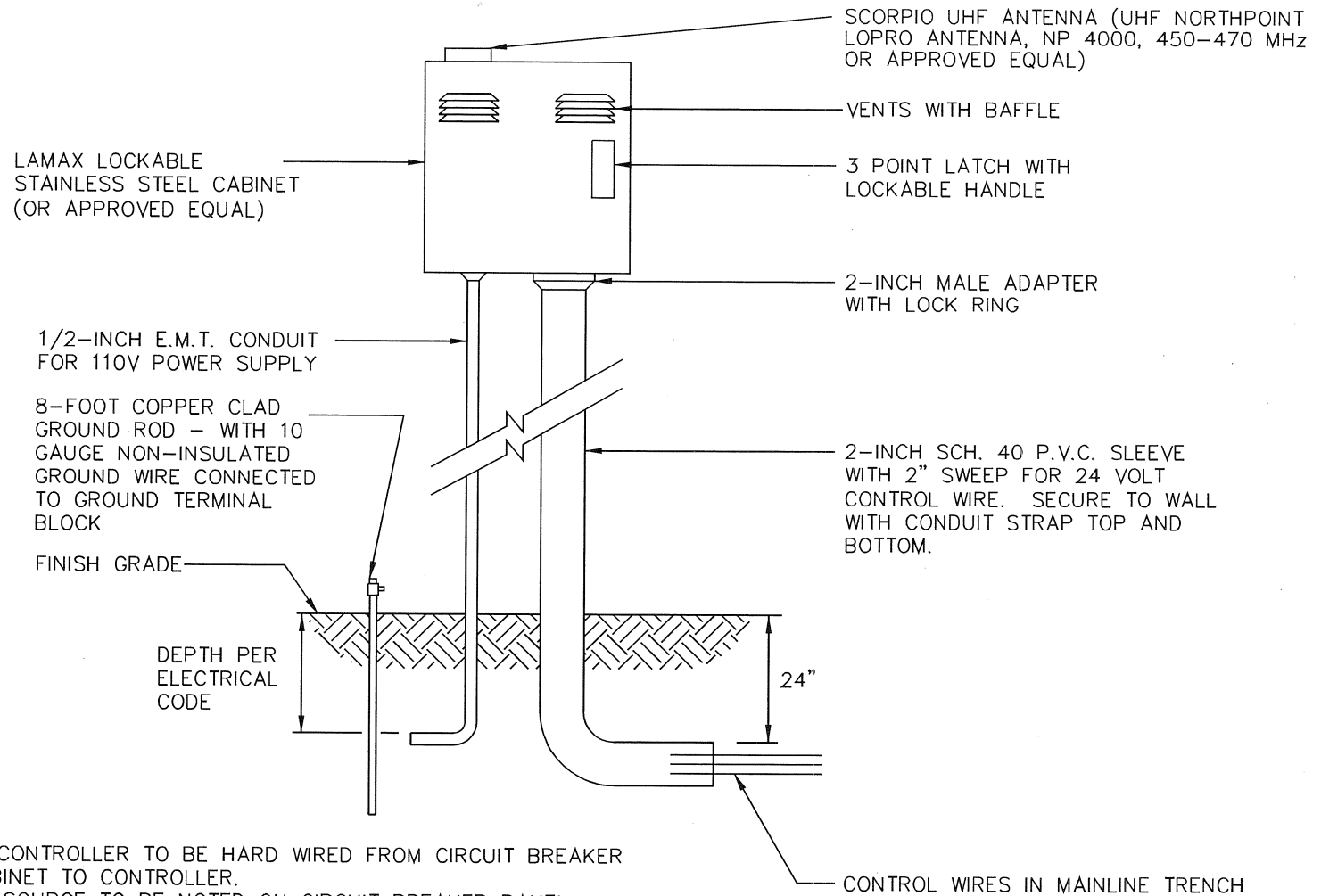
DETAIL NO.
2632

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

SCORPIO PEDESTAL MOUNTED CONTROLLER

DETAIL NO.
2632



NOTES:

1. POWER SOURCE FOR CONTROLLER TO BE HARD WIRED FROM CIRCUIT BREAKER MOUNTED INSIDE CABINET TO CONTROLLER.
2. LOCATION OF POWER SOURCE TO BE NOTED ON CIRCUIT BREAKER PANEL.
3. REMOTE CONTROL VALVES FOR D.C. SCORPIO APPLICATIONS MUST HAVE D.C. LATCHING SOLENOIDS AND APPROVED SOLAR PANEL FOR POWER SOURCE.
4. JSLM NARROW BAND RADIO #2845 G TO BE INSTALLED WITH SCORPIO CONTROLLER.
5. PROGRAMMING KEYPAD TO BE SUPPLIED WITH CONTROLLER.
6. INSTALL ONLY ONE CONTROL VALVE WIRE PER CONTROLLER OUTPUT.
7. UHF RADIO TO BE TUNED TO C.O.S. FREQUENCIES. CONTACT IRRIGATION DEPARTMENT FOR INFORMATION (480-312-2189)

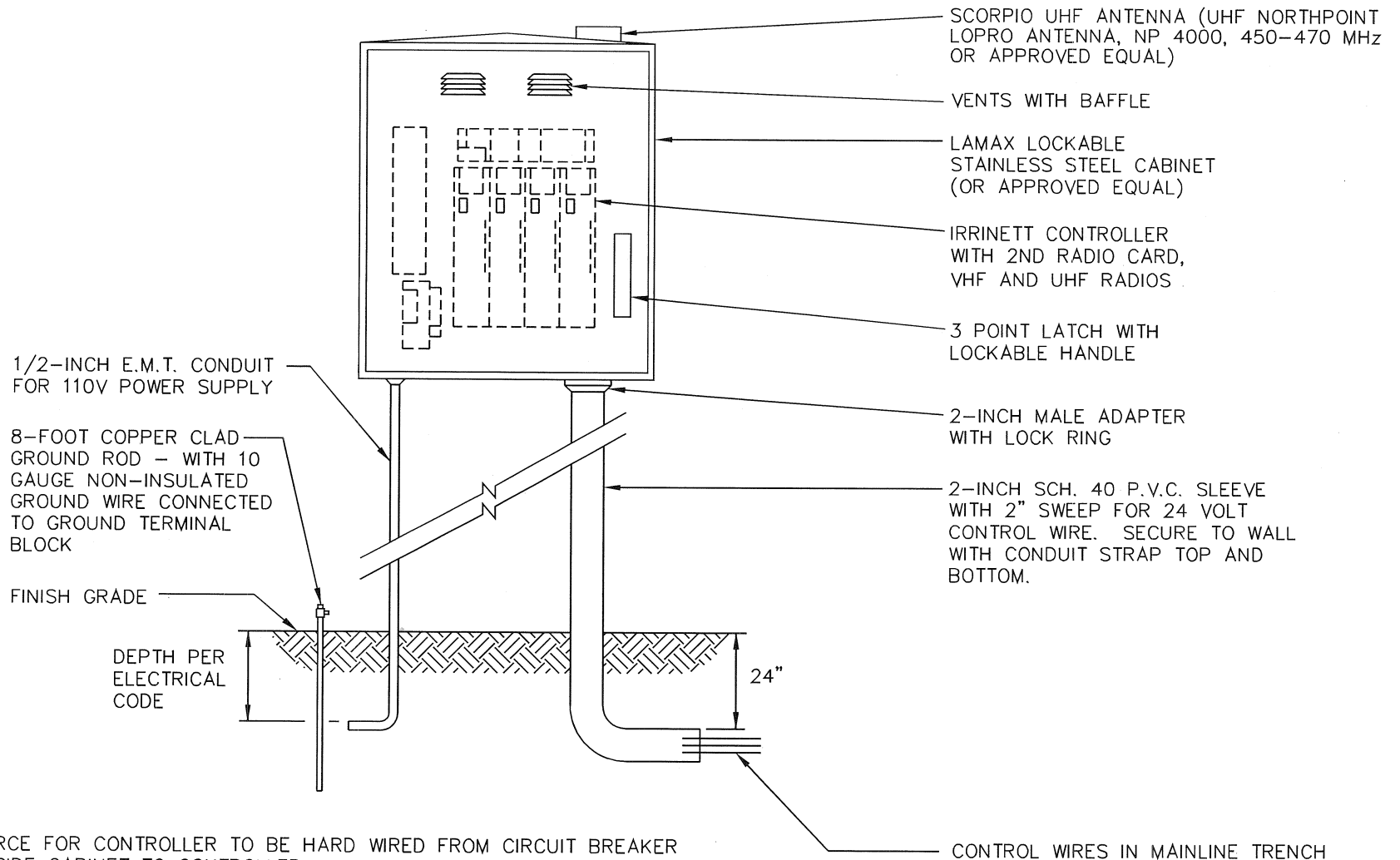
DETAIL NO.
2633

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

SCORPIO WALL MOUNTED CONTROLLER

DETAIL NO.
2633



NOTE:

1. POWER SOURCE FOR CONTROLLER TO BE HARD WIRED FROM CIRCUIT BREAKER MOUNTED INSIDE CABINET TO CONTROLLER.
2. LOCATION OF POWER SOURCE TO BE NOTED ON CIRCUIT BREAKER PANEL.
3. PROGRAMMING KEYPAD TO BE SUPPLIED WITH CONTROLLER.
4. INSTALL ONLY ONE CONTROL VALVE WIRE PER CONTROLLER OUTPUT.
5. VHF AND UHF RADIOS TO BE TUNED TO C.O.S. FREQUENCIES. CONTACT IRRIGATION DEPARTMENT FOR INFORMATION (480-312-2189)

DETAIL NO.
2634

City of Scottsdale
Standard Details

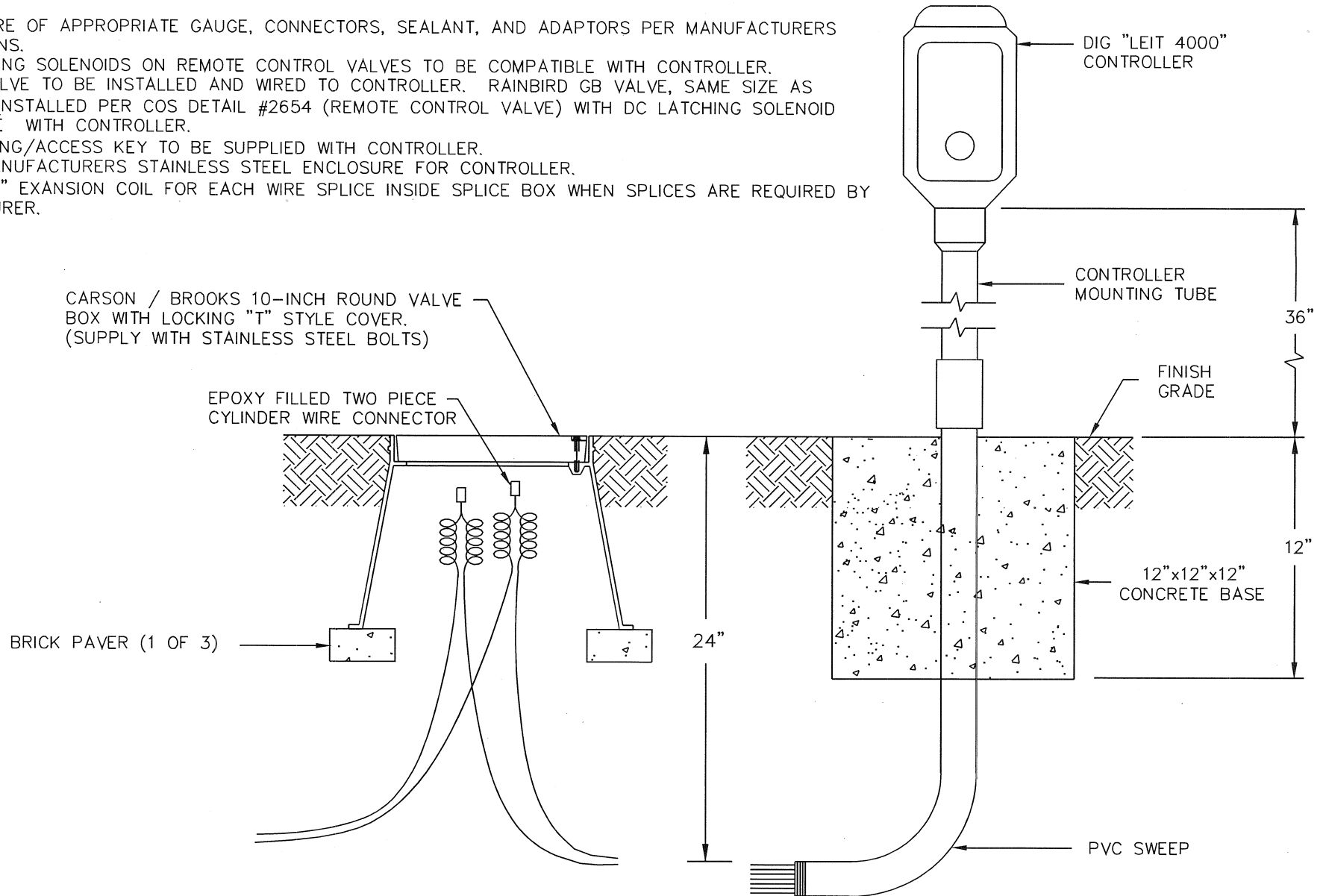
APPROVED BY:
Scottsdale Standards &
Specifications Committee

IRRINET WALL MOUNTED CONTROLLER

DETAIL NO.
2634

NOTES:

1. INSTALL WIRE OF APPROPRIATE GAUGE, CONNECTORS, SEALANT, AND ADAPTORS PER MANUFACTURERS INSTRUCTIONS.
2. D.C. LATCHING SOLENOIDS ON REMOTE CONTROL VALVES TO BE COMPATIBLE WITH CONTROLLER.
3. MASTER VALVE TO BE INSTALLED AND WIRED TO CONTROLLER. RAINBIRD GB VALVE, SAME SIZE AS MAINLINE INSTALLED PER COS DETAIL #2654 (REMOTE CONTROL VALVE) WITH DC LATCHING SOLENOID COMPATIBLE WITH CONTROLLER.
4. PROGRAMMING/ACCESS KEY TO BE SUPPLIED WITH CONTROLLER.
5. INSTALL MANUFACTURERS STAINLESS STEEL ENCLOSURE FOR CONTROLLER.
6. PROVIDE 12" EXANSION COIL FOR EACH WIRE SPLICE INSIDE SPLICE BOX WHEN SPLICES ARE REQUIRED BY MANUFACTURER.



DETAIL NO.
2635-1

City of Scottsdale
Standard Details

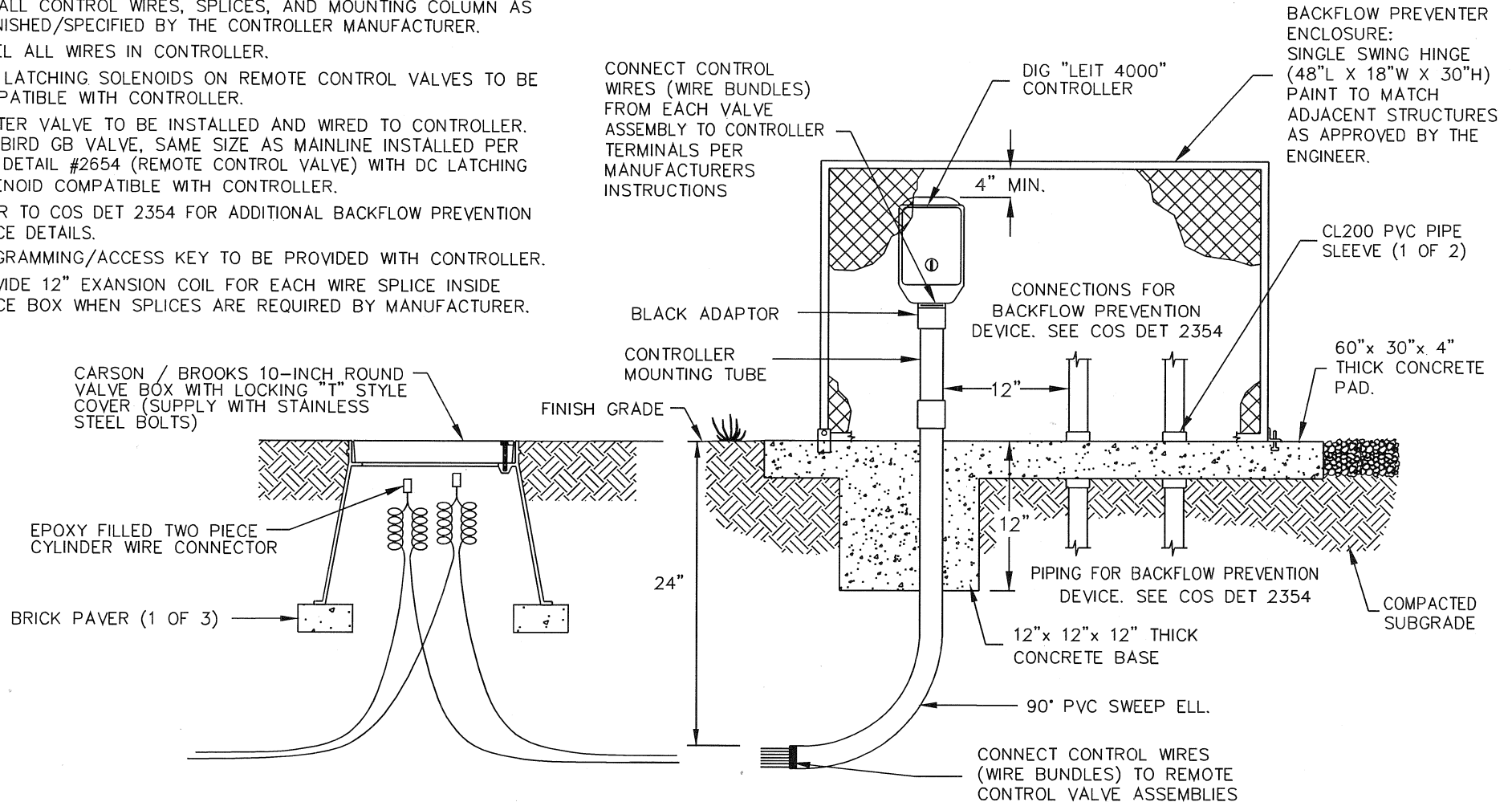
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

SOLAR CONTROLLER

DETAIL NO.
2635-1

NOTES:

1. INSTALL WIRING OF APPROPRIATE GAUGE, CONNECTORS, SEALANT, AND ADAPTORS PER MANUFACTURERS INSTRUCTIONS.
2. INSTALL CONTROL WIRES, SPLICES, AND MOUNTING COLUMN AS FURNISHED/SPECIFIED BY THE CONTROLLER MANUFACTURER.
3. LABEL ALL WIRES IN CONTROLLER.
4. D.C. LATCHING SOLENOIDS ON REMOTE CONTROL VALVES TO BE COMPATIBLE WITH CONTROLLER.
5. MASTER VALVE TO BE INSTALLED AND WIRED TO CONTROLLER. RAINBIRD GB VALVE, SAME SIZE AS MAINLINE INSTALLED PER COS DETAIL #2654 (REMOTE CONTROL VALVE) WITH DC LATCHING SOLENOID COMPATIBLE WITH CONTROLLER.
6. REFER TO COS DET 2354 FOR ADDITIONAL BACKFLOW PREVENTION DEVICE DETAILS.
7. PROGRAMMING/ACCESS KEY TO BE PROVIDED WITH CONTROLLER.
8. PROVIDE 12" EXANSION COIL FOR EACH WIRE SPLICE INSIDE SPLICE BOX WHEN SPLICES ARE REQUIRED BY MANUFACTURER.



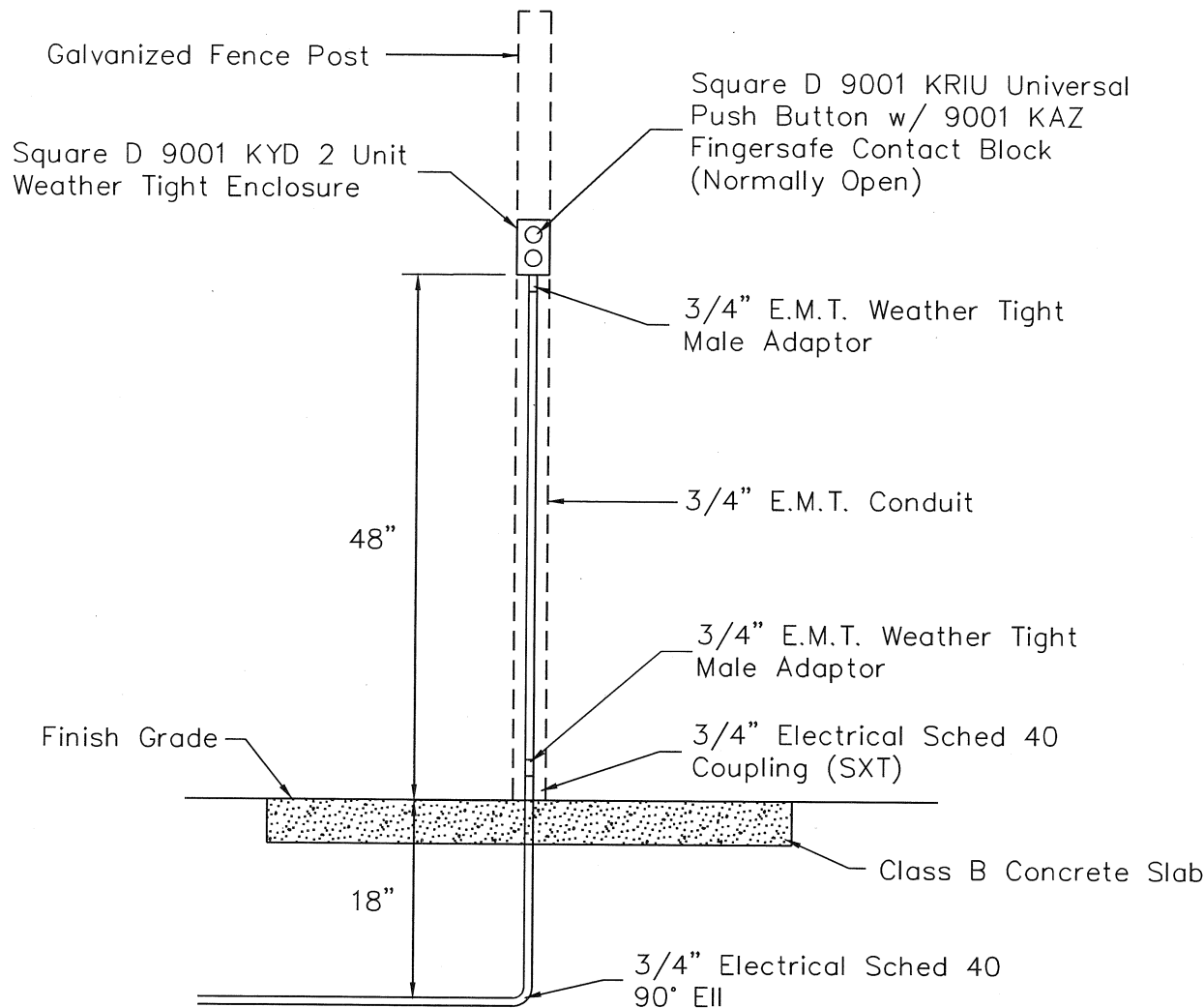
DETAIL NO.
2635-2

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

SOLAR CONTROLLER AND BACKFLOW PREVENTER ENCLOSURE

DETAIL NO.
2635-2



NOTES:

1. Install #14 ga. irrigation control wire.
2. Install one control wire per push button. Control wire to be different color from all other irrigation control wires.
3. Common wire (#12 ga) for push buttons shall be a separate common wire and not part of the irrigation control valve common wire.
4. Push button common wire to have color stripe matching push button control wire. The common wire may be shared by other push buttons.
5. Attach push button enclosure to galvanized post with two self-tapping hex head screws.
6. For other configurations/applications, contact Irrigation Dept 480-312-2189.
7. Label control wires inside enclosure and at controller to differentiate their functionality.

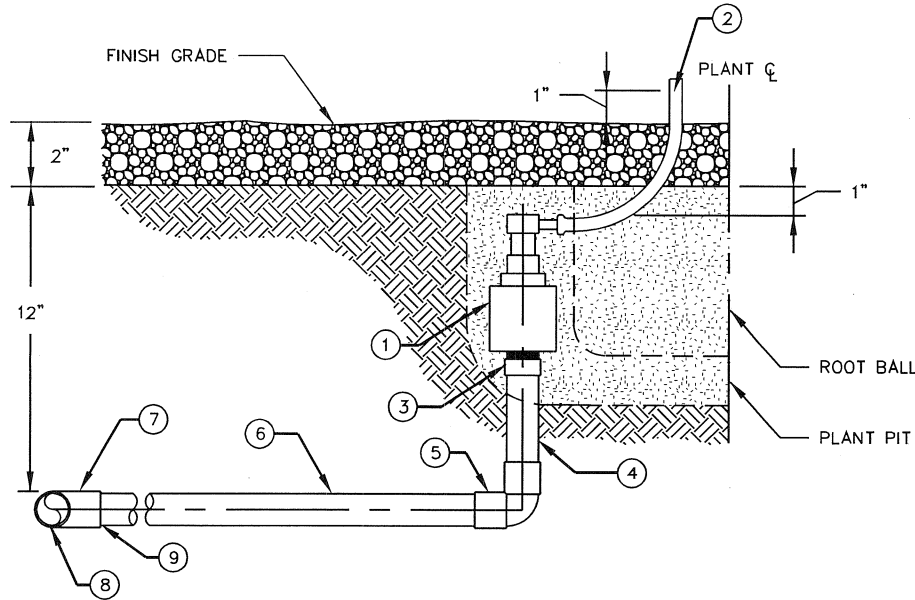
DETAIL NO.
2636

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

IRRIGATION PUSH BUTTON CONTROL

DETAIL NO.
2636



SINGLE OUTLET EMITTER ALL SHRUBS & GROUND COVER

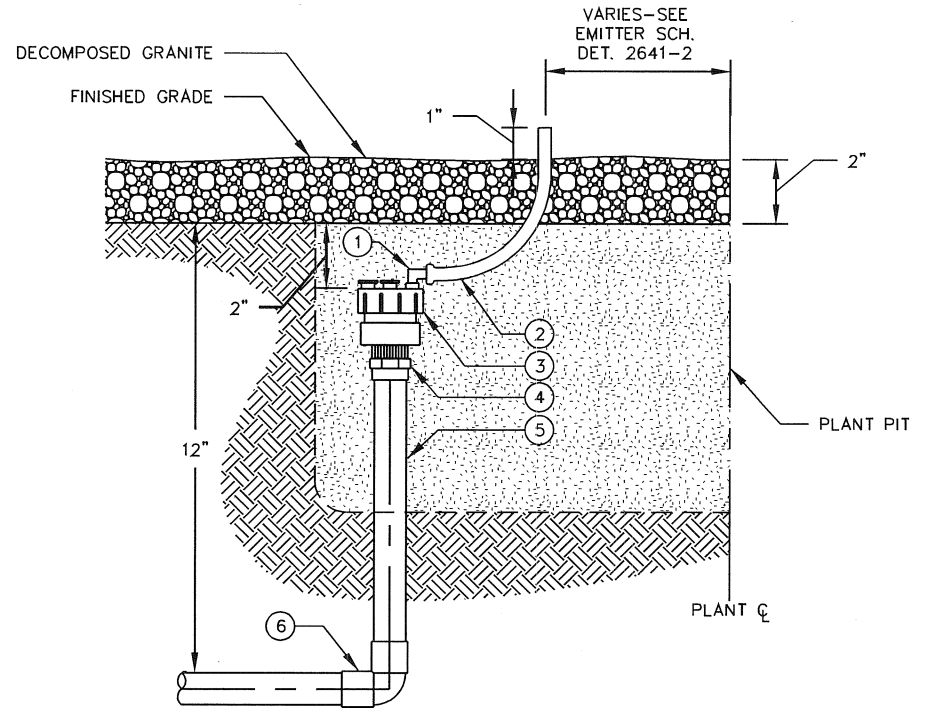
SCALE: NTS

LIST OF MATERIALS

- ① BOWSMITH SL - SERIES SINGLE PORT EMITTER OR APPROVED EQUAL. LOCATE ON UPHILL SIDE OF PLANT CENTERLINE
- ② 1/4" POLY FLEX HOSE EMITTER TUBING
- ③ 1/2" PVC SCH 40 MALE ADAPTOR
- ④ AG. PRODUCTS - 1/2" I.P.S. FLEXIBLE VINYL PVC PIPE OR APPROVED EQUAL
- ⑤ 1/2" PVC SCH 40 90° ELBOW
- ⑥ 1/2" PVC CL 315 PIPE
- ⑦ 1/2" PVC SCH 40 FITTING
- ⑧ PVC CL 315 FOR 1/2" LATERALS, PVC CL 200 FOR LATERALS GREATER THAN 1/2"
- ⑨ INSTALL BUSHING AS REQUIRED.

NOTES

1. PIPE CEMENT & PRIMER SHALL BE AS SPECIFIED BY MANUFACTURER FOR FLEXIBLE AND RIGID PIPE CONNECTIONS.
2. EMITTER TUBING EMISSION POINTS SHALL BE EQUALLY SPACED AND LOCATED TO DIRECT WATER FLOW TO THE PERIMETER OF THE DRIP LINE.
3. NUMBER OF OPENINGS AND EMITTER TUBES REQUIRED IS BASED ON PLANT SIZE. (SEE COS STD. DET. 2641-2)
4. MAXIMUM EMITTER TUBING LENGTH = 36".



MULTI-OUTLET EMITTER TREES ONLY

SCALE: NTS

LIST OF MATERIALS

- ① SWIVEL OUTLET 90° ELBOW
- ② 1/4" POLY FLEX HOSE EMITTER TUBING
- ③ BOWSMITH ML 200 SERIES MULTI-PORT EMITTER OR APPROVED EQUAL. LOCATE ON UPHILL SIDE OF PLANT CL
- ④ 1/2" PVC SCH 40 MALE ADAPTER
- ⑤ AG. PRODUCTS 1/2" I.P.S. FLEXIBLE VINYL PVC PIPE OR APPROVED EQUAL
- ⑥ 1/2" PVC SCH 40 FITTING

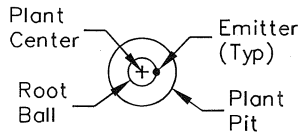
DETAIL NO.
2641-1

City of Scottsdale
Standard Details

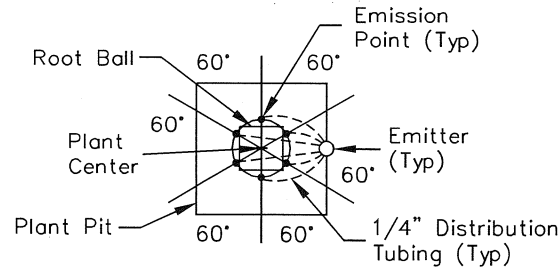
APPROVED BY:
Scottsdale Standards &
Specifications Committee

SINGLE & MULTI-OUTLET EMITTERS

DETAIL NO.
2641-1

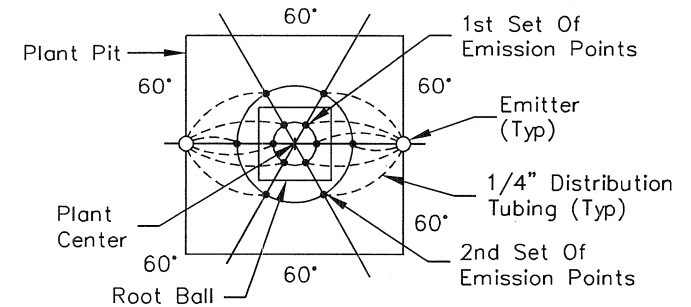


**SHRUB EMITTER
SINGLE OUTLET**



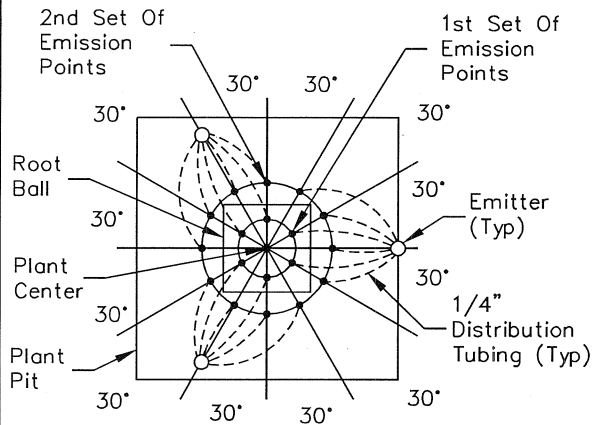
**TREE EMITTER - MULTI OUTLET
15 GAL TO 42" BOX TREES**

(SEE EMITTER SCHEDULE)



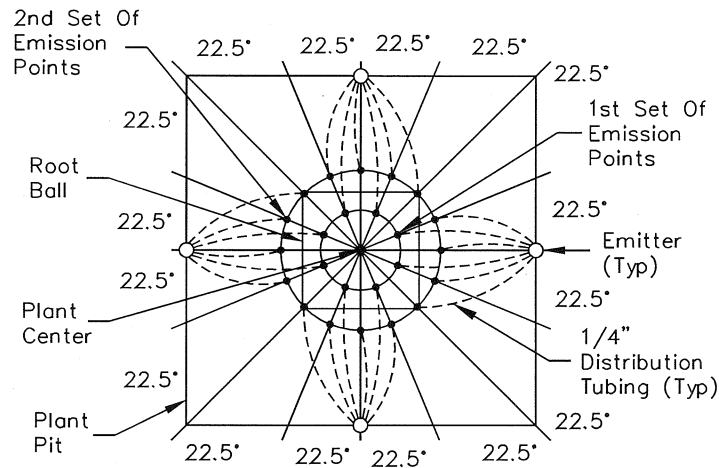
**TREE EMITTER - MULTI OUTLET
48" BOX TO 60" BOX TREES**

(SEE EMITTER SCHEDULE)



**TREE EMITTER - MULTI OUTLET
66" BOX TO 84" BOX TREES**

(SEE EMITTER SCHEDULE)



**TREE EMITTER - MULTI OUTLET
96" BOX TREES**

(SEE EMITTER SCHEDULE)

EMITTER SCHEDULE

Tree Size	Number Of Multi Outlet Emitters - Outlet Quantity = Emitter GPH Total	Distance From Trunk	
		1st Set Of Emission Points	2nd Set Of Emission Points
15 Gal.	1-1 GPH=6 GPH	3 @ 12"	
24" Box	1-1 GPH=6 GPH	4 @ 18"	
30" Box	1-1 GPH=6 GPH	6 @ 21"	
36" Box	1-2 GPH=12 GPH	6 @ 24"	
42" Box	1-2 GPH=12 GPH	6 @ 27"	
48" Box	2-2 GPH=24 GPH	6 @ 12"	4 @ 42"
54" Box	2-2 GPH=24 GPH	6 @ 15"	5 @ 45"
60" Box	2-2 GPH=24 GPH	6 @ 18"	6 @ 48"
66" Box	3-2 GPH=36 GPH	6 @ 24"	12 @ 54"
72" Box			
78" Box	3-2 GPH=36 GPH	6 @ 30"	12 @ 60"
84" Box			
≥ 90" Box	4-2 GPH=48 GPH	8 @ 33"	16 @ 66"

DETAIL NO.

2641-2

**City of Scottsdale
Standard Details**

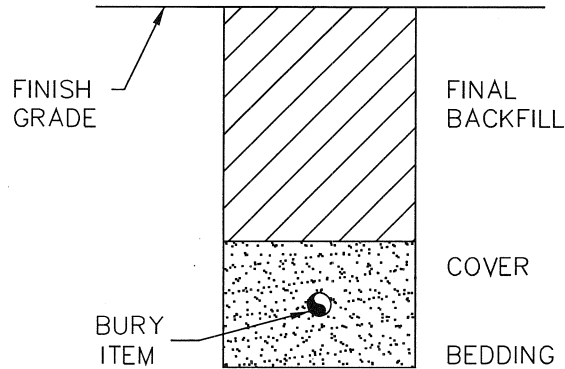
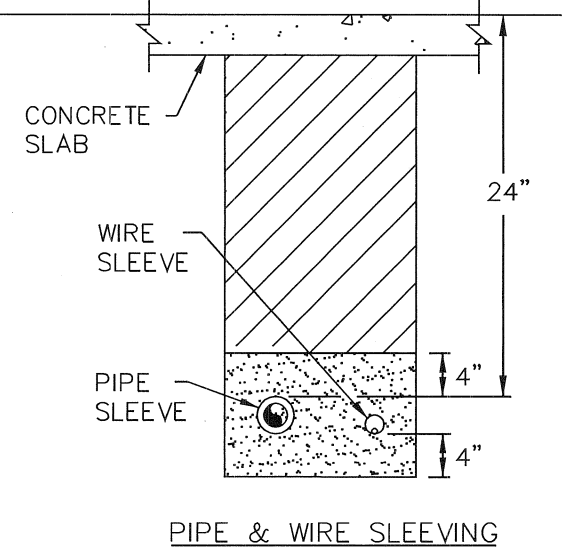
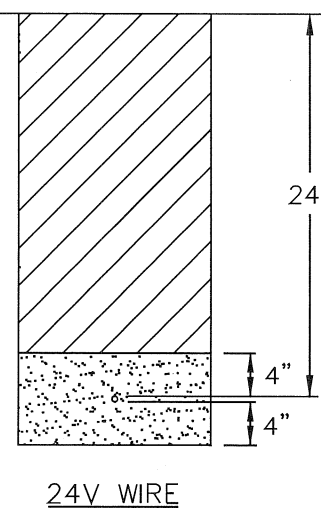
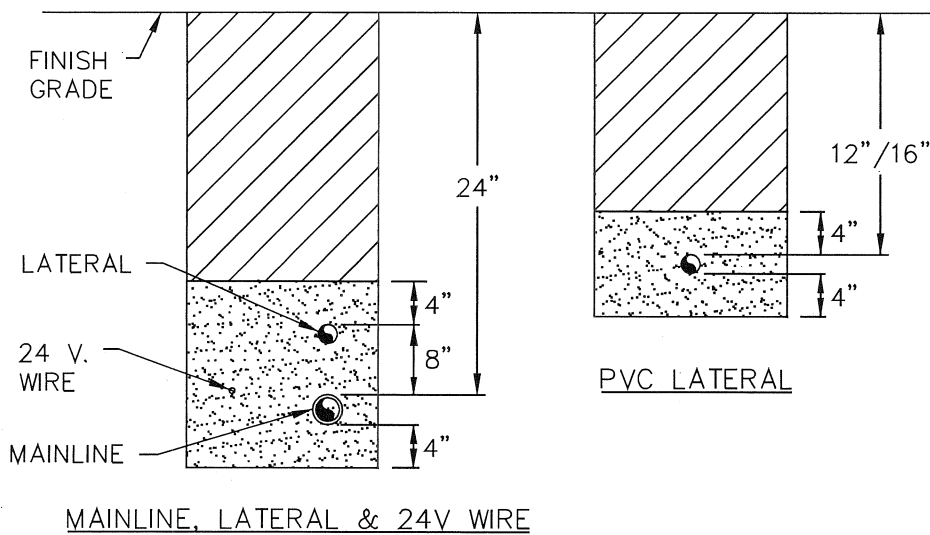
APPROVED BY:

**Scottsdale Standards &
Specifications Committee**

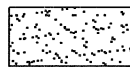
IRRIGATION EMITTER LAYOUT

DETAIL NO.

2641-2



EXCAVATED MATERIAL SHALL BE FINELY SCREENED WITH NO ROCKS LARGER THAN 1".



BEDDING AND COVER MATERIAL SHALL BE TOPSOIL WITH NO ROCKS.

NOTES:

1. BEDDING SHALL BE PLACED AND LEVELED PRIOR TO INSTALLATION OF BURY ITEM.
2. BACKFILL SHALL BE PLACED IN MAXIMUM 6" LIFTS.
3. SLEEVE ALL PIPE AND WIRE SEPARATELY. SLEEVE 2 X DIA. OF PIPE. ONE PIPE PER SLEEVE.
4. ALL PIPE TO BE INSTALLED PER MANUFACTURES SPECIFICATIONS WITH PIPE LABELING FACING UP FOR INSPECTION PURPOSES. PROVIDE A MINIMUM OF 2" CLEARANCE TO SIDE OF TRENCH AND BETWEEN PIPES.
5. ALL 120 V. WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
6. TAPE AND BUNDLE IRRIGATION CONTROL WIRES EVERY 10'. PROVIDE LOOSE 20" LOOP AT ALL CHANGES OF DIRECTION OVER 30'.
7. ALL REMOTE CONTROL VALVE WIRING NOT INSTALLED WITH MAINLINE PIPE SHALL BE INSTALLED IN A MINIMUM 2" SCHEDULE 40 GREY ELECTRICAL CONDUIT OR AS APPROVED.
8. "NON-POTABLE" WARNING TAPE TO BE INSTALLED ON ALL PRESSURIZED MAINLINES 12" ABOVE THE PIPE.
9. INSTALL ONE ADDITIONAL SLEEVE SIZED TO MATCH THE LARGEST REQUIRED SLEEVE WITH ENDS TAPED FOR FUTURE USE.

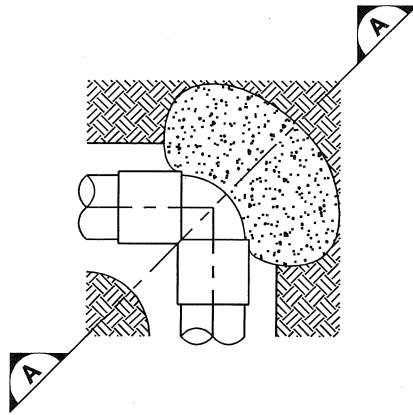
DETAIL NO.
2642

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

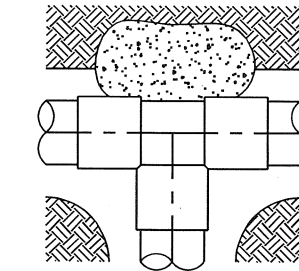
IRRIGATION TRENCHING

DETAIL NO.
2642



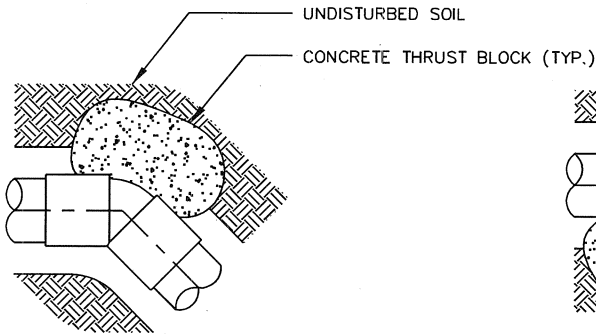
90° ELL

SCALE: NTS



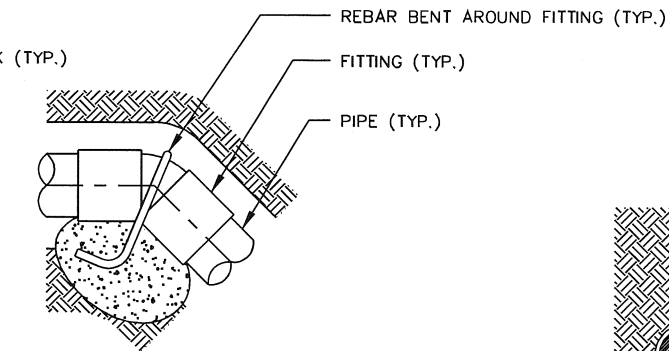
TEE

SCALE: NTS



45° ELL

SCALE: NTS



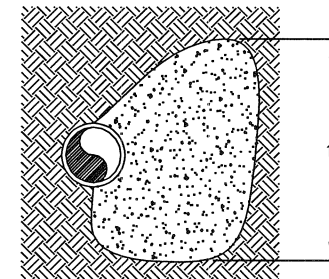
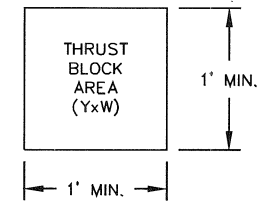
45° ELL (VERTICAL)

SCALE: NTS

MINIMUM THRUST BLOCK AREA (YxW)		
PIPE SIZE	IRRIGATION PIPE	
	TEE, DEAD END	90° BEND
2" & LESS		45" 22.5"
3"	1 SF	.5 SF
4"	1.5 SF	1 SF
5" & LARGER	2 SF	1.5 SF
	PER MAG DETAIL 380	PER MAG DETAIL 380

NOTES

1. MINIMUM THRUST BLOCK AREAS ARE BASED ON A SOIL BEARING CAPACITY OF 3000 LBS/SF
2. THRUST BLOCK SHALL EXTEND INTO UNDISTURBED SOIL.
3. THRUST BLOCK SHALL BE MAG SECT. 725-CLASS C.



SECTION A

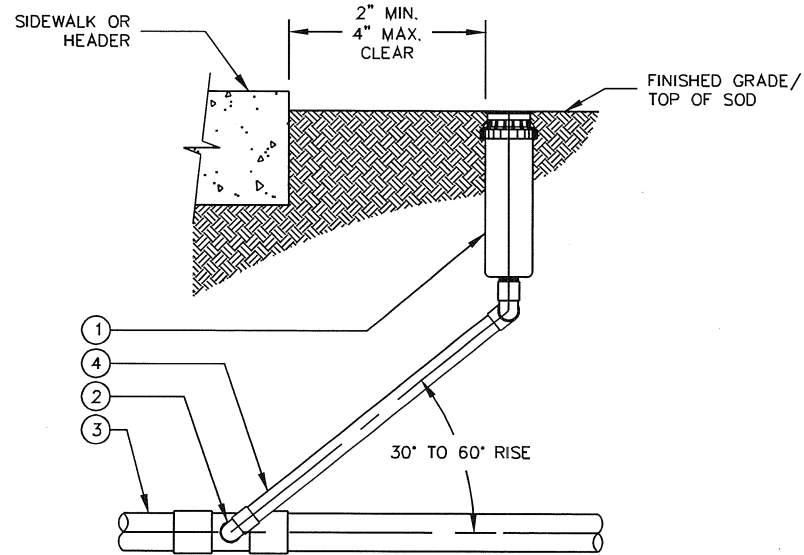
**DETAIL NO.
2643**

**City of Scottsdale
Standard Details**

**APPROVED BY:
Scottsdale Standards &
Specifications Committee**

IRRIGATION THRUST BLOCK

**DETAIL NO.
2643**

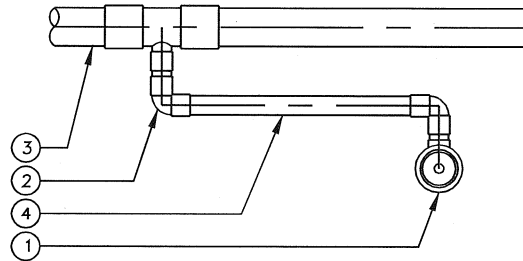


**SWING JOINT ASSEMBLY
ELEVATION**

SCALE: NTS

LIST OF MATERIALS

- ① ROTOR SPRINKLER HEAD
- ② STREET ELL (1 OF 3) SCH 40 PVC
- ③ PVC LATERAL PIPE
- ④ SCH 80 NIPPLE TBE



SWING JOINT ASSEMBLY PLAN

SCALE: NTS

NOTES

- 1. SWING JOINT TO BE THE SAME SIZE AS SPRINKLER HEAD INLET.
- 2. NO PRE-FAB SWING JOINTS
- 3. NO MARLEX FITTINGS

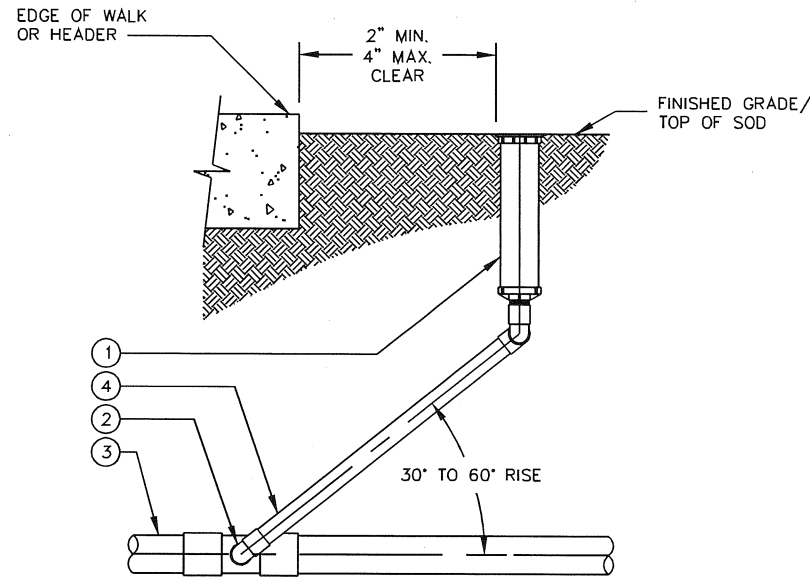
DETAIL NO.
2644

City of Scottsdale
Standard Details

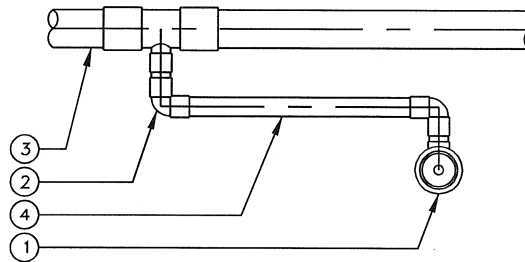
APPROVED BY:
Scottsdale Standards &
Specifications Committee

ROTOR SPRINKLER ASSEMBLY

DETAIL NO.
2644



**SWING JOINT ASSEMBLY
ELEVATION**
SCALE: NTS



SWING JOINT ASSEMBLY PLAN
SCALE: NTS

LIST OF MATERIALS

- ① 4" POP-UP SPRAY SPRINKLER HEAD
- ② STREET ELL (1 OF 3) SCH 40 PVC
- ③ PVC LATERAL PIPE
- ④ SCH 80 NIPPLE TBE

NOTES

- 1. SWING JOINT TO BE THE SAME SIZE AS SPRINKLER HEAD INLET.
- 2. NO PRE-FAB SWING JOINTS
- 3. NO MARLEX FITTINGS

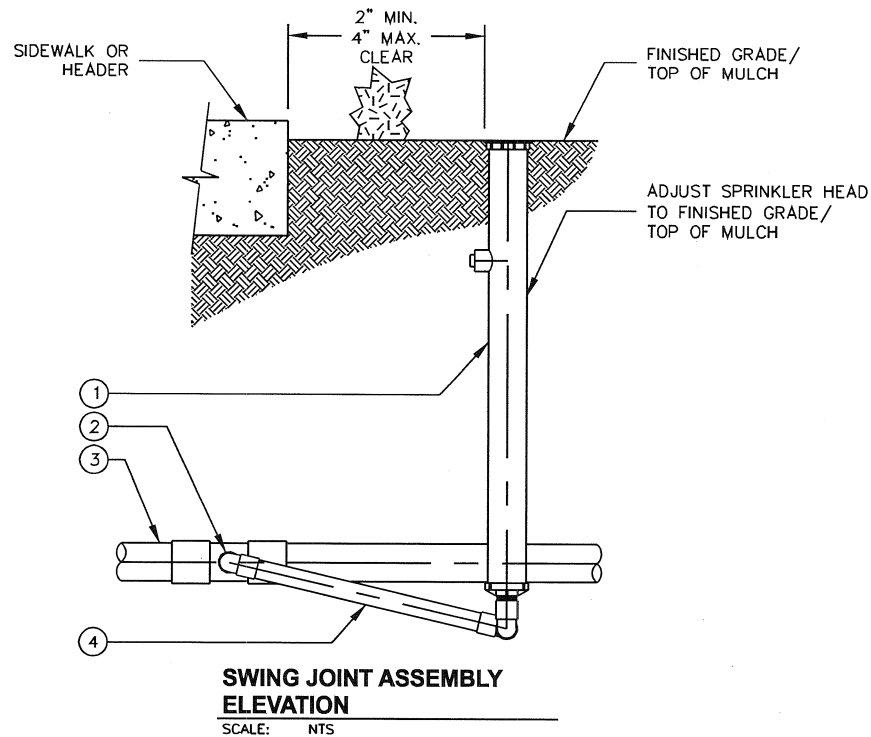
**DETAIL NO.
2645**

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

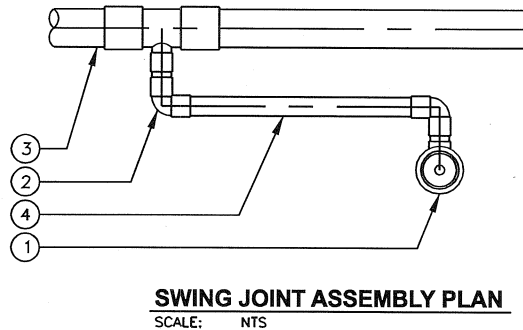
POP-UP SPRINKLER ASSEMBLY

**DETAIL NO.
2645**



LIST OF MATERIALS

- ① 12" POP-UP SPRAY SPRINKLER HEAD
- ② STREET ELL (1 OF 3) SCH 40 PVC
- ③ PVC LATERAL PIPE
- ④ SCH 80 NIPPLE TBE



NOTES

- 1. SWING JOINT TO BE THE SAME SIZE AS SPRINKLER HEAD INLET.
- 2. SWING JOINT SHALL BE CONNECTED TO BOTTOM OUTLET.
- 3. NO PRE-FAB SWING JOINTS
- 4. NO MARLEX FITTINGS

DETAIL NO.
2646

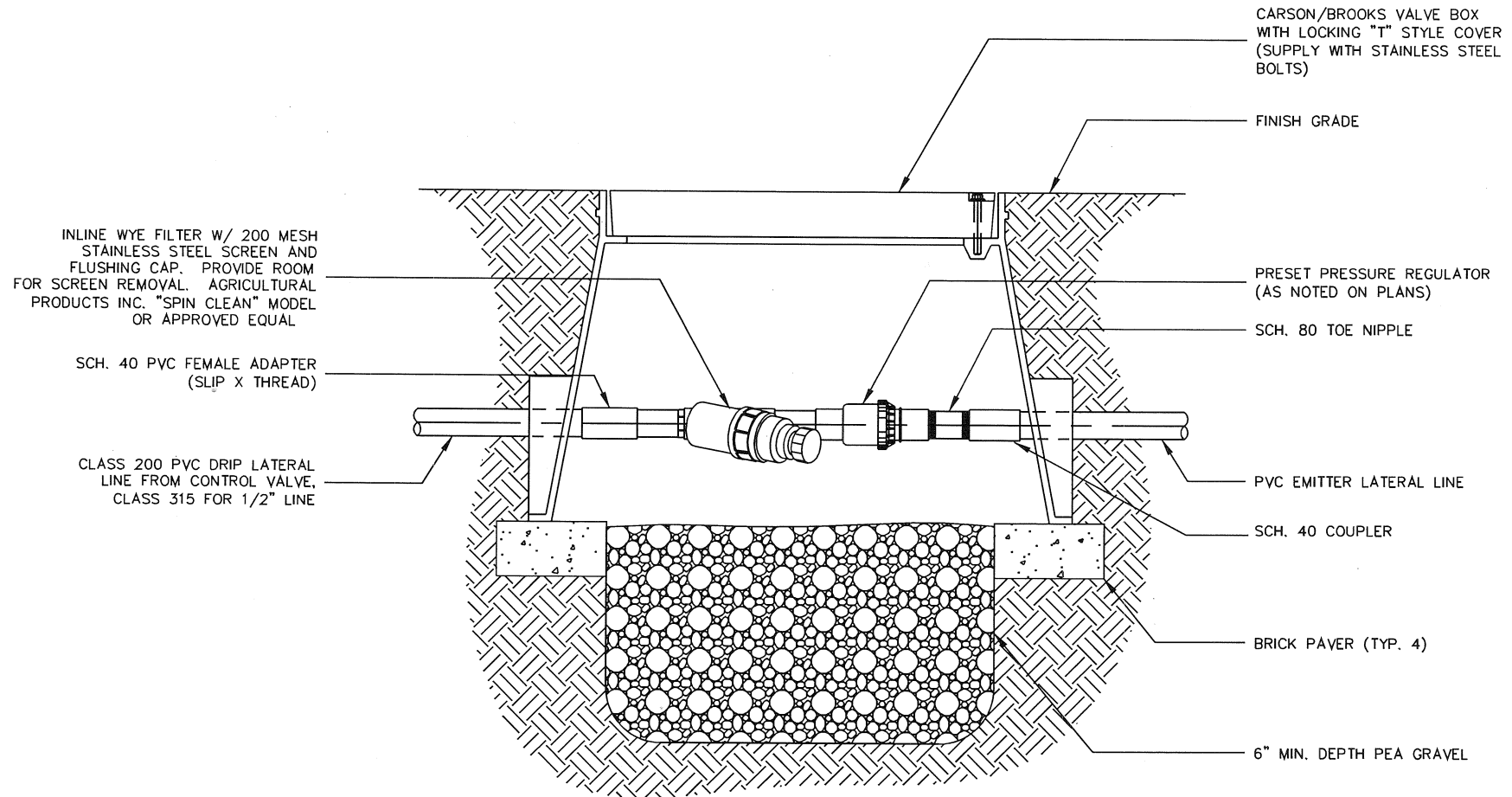
City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

SHRUB POP-UP SPRINKLER ASSEMBLY

DETAIL NO.
2646

REVISED: 7/15/03



**DRIP FILTER &
PRESS. REG. ASSEMBLY**

SCALE: NTS

DETAIL NO.
2647

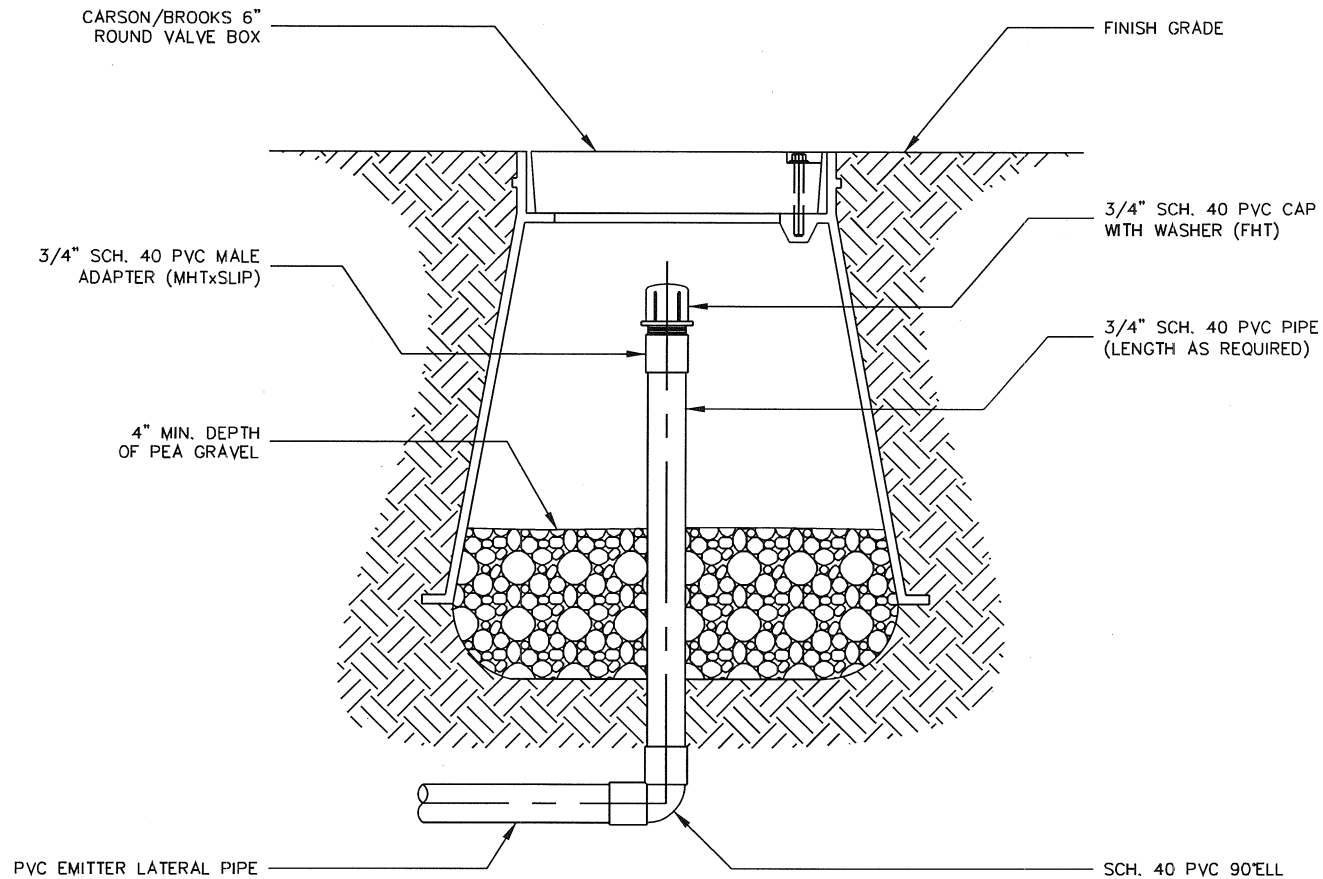
City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

DRIP FILTER & PRESSURE REGULATOR

DETAIL NO.
2647

REVISED: 1/5/00



EMITTER FLUSH CAP ASSEMBLY

SCALE: NTS

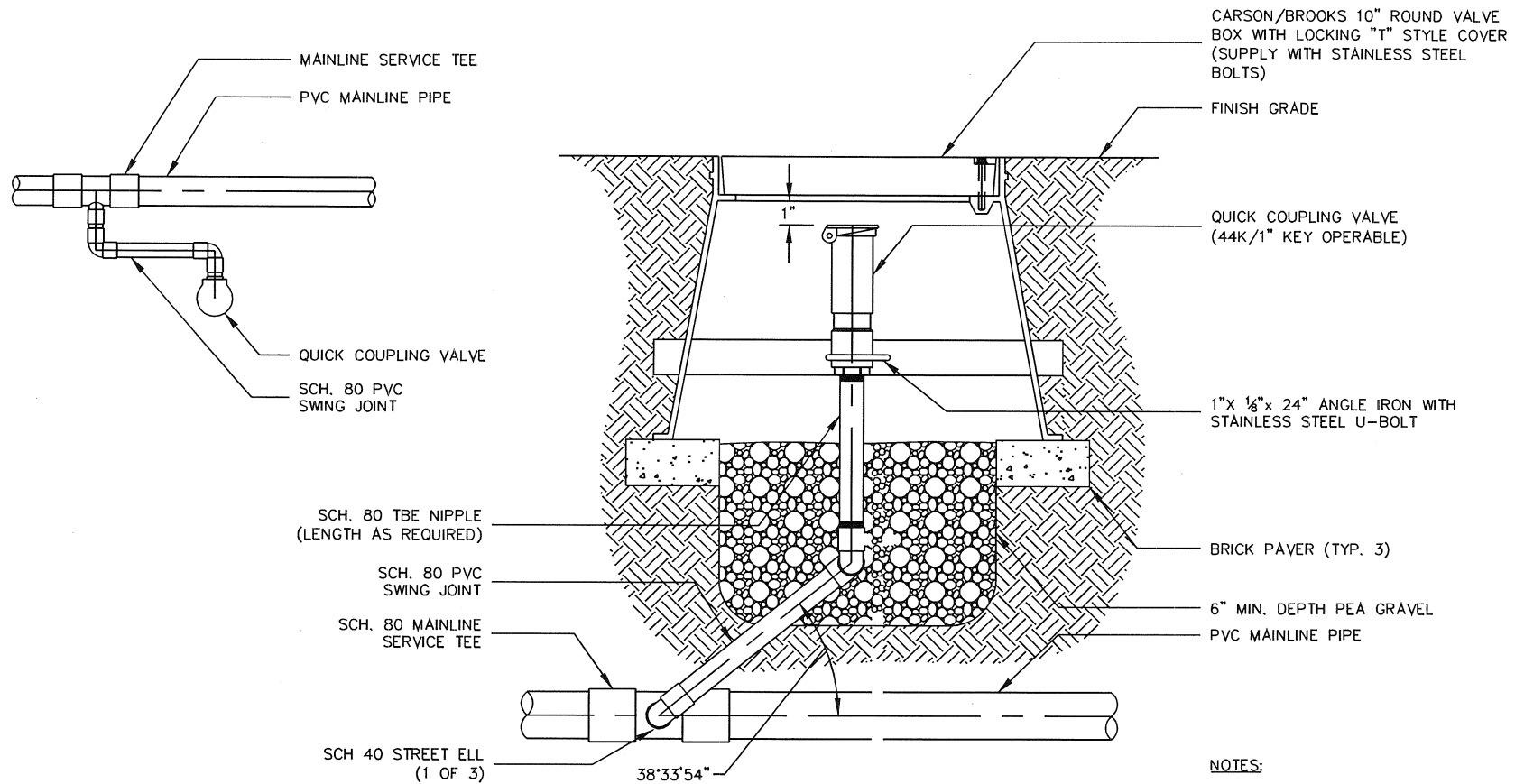
DETAIL NO.
2648

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

EMITTER FLUSH CAP ASSEMBLY

DETAIL NO.
2648



NOTES:

1. EACH QUICK COUPLER SHALL BE IN A SEPARATE VALVE BOX.
2. SWING JOINT SHALL BE THE SAME SIZE AS QUICK COUPLER VALVE.
3. NO PRE-FAB SWING JOINTS.
4. U-BOLT TO BE SECURED WITH LOCK WASHERS AND BACK-UP LOCKING NUT.

QUICK COUPLER ASSEMBLY

SCALE: NTS

DETAIL NO.
2649

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

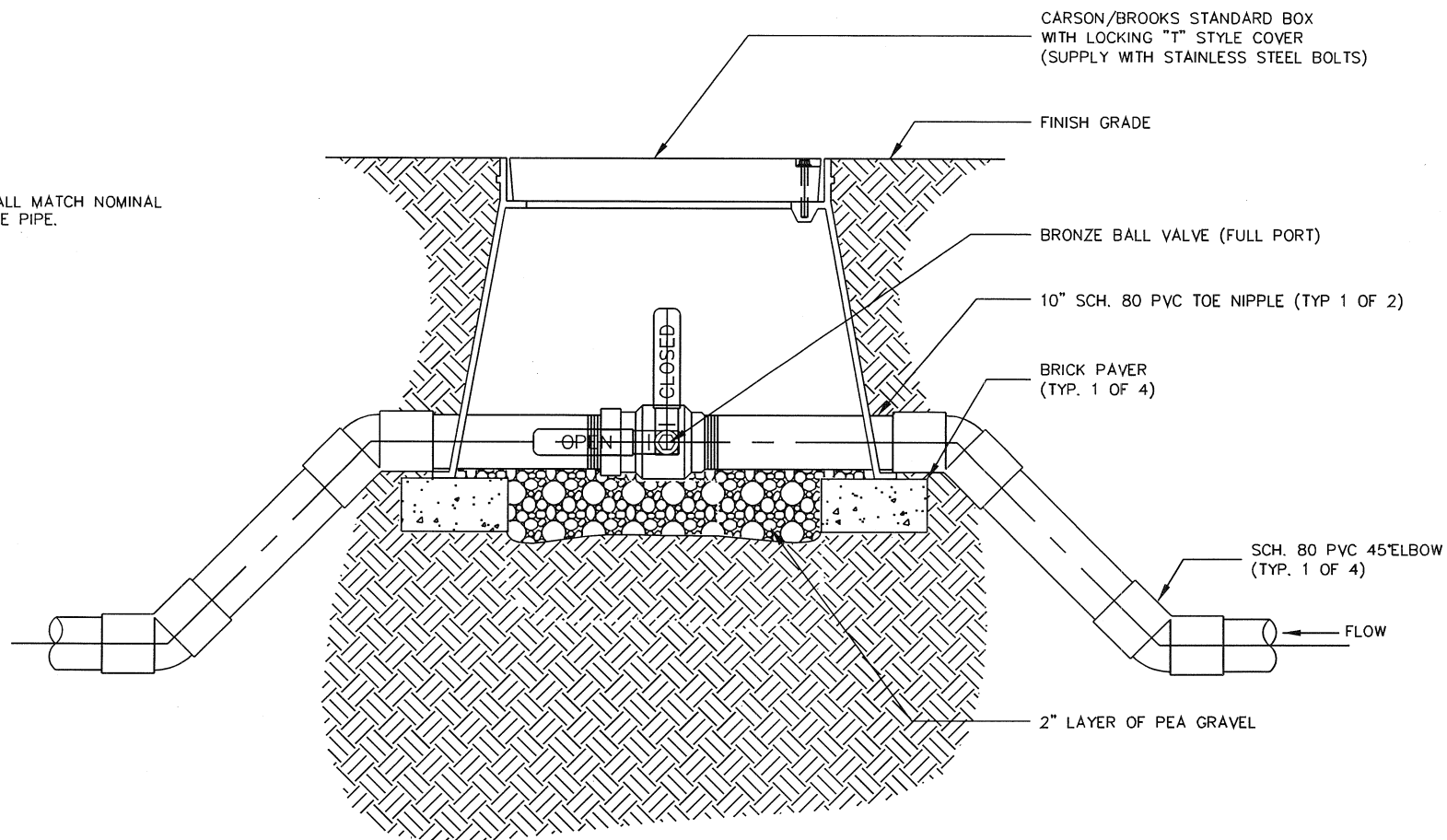
QUICK COUPLER ASSEMBLY

DETAIL NO.
2649

REVISED: 7/15/03

NOTE:

1. BALL VALVE SHALL MATCH NOMINAL SIZE OF MAINLINE PIPE.



**1-1/2" & SMALLER MAINLINE
ISOLATION BALL VALVE ASSEMBLY**

SCALE: NTS

DETAIL NO.
2650

City of Scottsdale
Standard Details

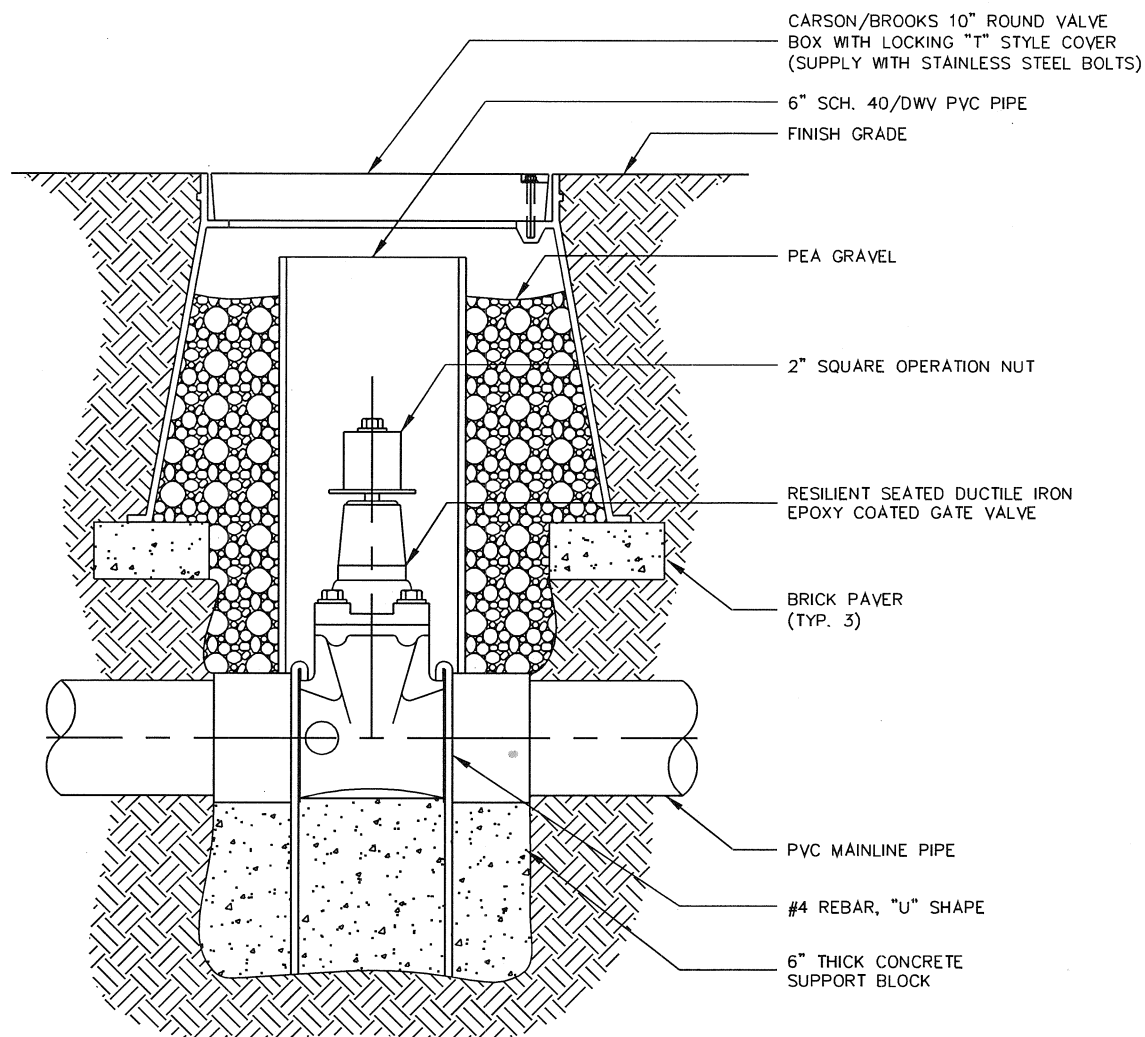
APPROVED BY:
Scottsdale Standards &
Specifications Committee

1-1/2" & SMALLER MAINLINE BALL VALVE

DETAIL NO.
2650

NOTE:-

1. GATE VALVE SHALL MATCH NOMINAL SIZE OF MAINLINE PIPE.
2. PROTECT VALVE BODY WITH 10MIL PLASTIC PRIOR TO INSTALLATION OF REBAR & SUPPORT BLOCK.



2" & LARGER MAINLINE ISOLATION GATE VALVE ASSEMBLY

SCALE: NTS

DETAIL NO.
2651

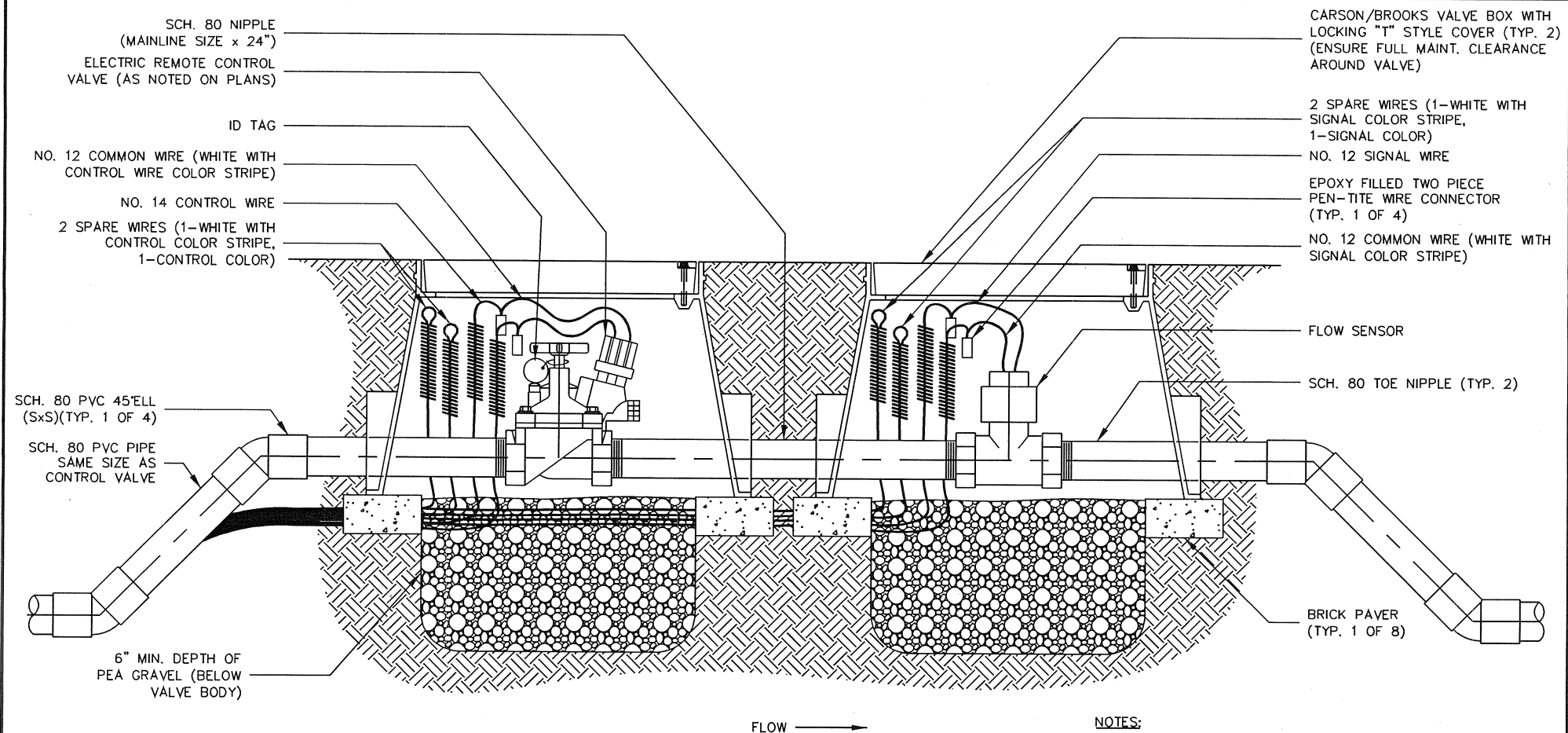
City of Scottsdale Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

2" & LARGER MAINLINE ISOLATION GATE VALVE

DETAIL NO.	2651
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REVISED: 7/15/03



**1" MASTER VALVE/
FLOW METER ASSEMBLY**

SCALE: NTS

NOTES:

1. PROVIDE 30" SLACK WIRE IN 3/4" COILS FOR EACH WIRE ENTERING VALVE BOX.
2. INSTALL VALVE I.D. TAG WITH CONTROLLER IDENTIFICATION AND STATION NUMBER WHICH CORRESPONDS TO THE PLANS.
3. MAINTAIN 2" MIN.-4" MAX. DISTANCE BETWEEN TOP OF CONTROL VALVE AND BOTTOM OF BOX LID.
4. CONTROL AND SIGNAL WIRE FROM MASTER VALVE TO CONTROLLER TO BE SEPARATE COLOR FROM OTHER VALVE WIRE. (CONTROL AND SIGNAL COMMONS TO BE SEPARATE FROM ANY OTHERS COMMONS IN THE SYSTEM.)
5. A DATA INDUSTRIAL MODEL 600-30 PULSE OUTPUT TRANSMITTER IS REQUIRED TO BE MOUNTED INSIDE THE CONTROLLER CABINET (SEE CITY IRRIGATION SUPERVISOR FOR WIRING INFORMATION).

DETAIL NO.
2652

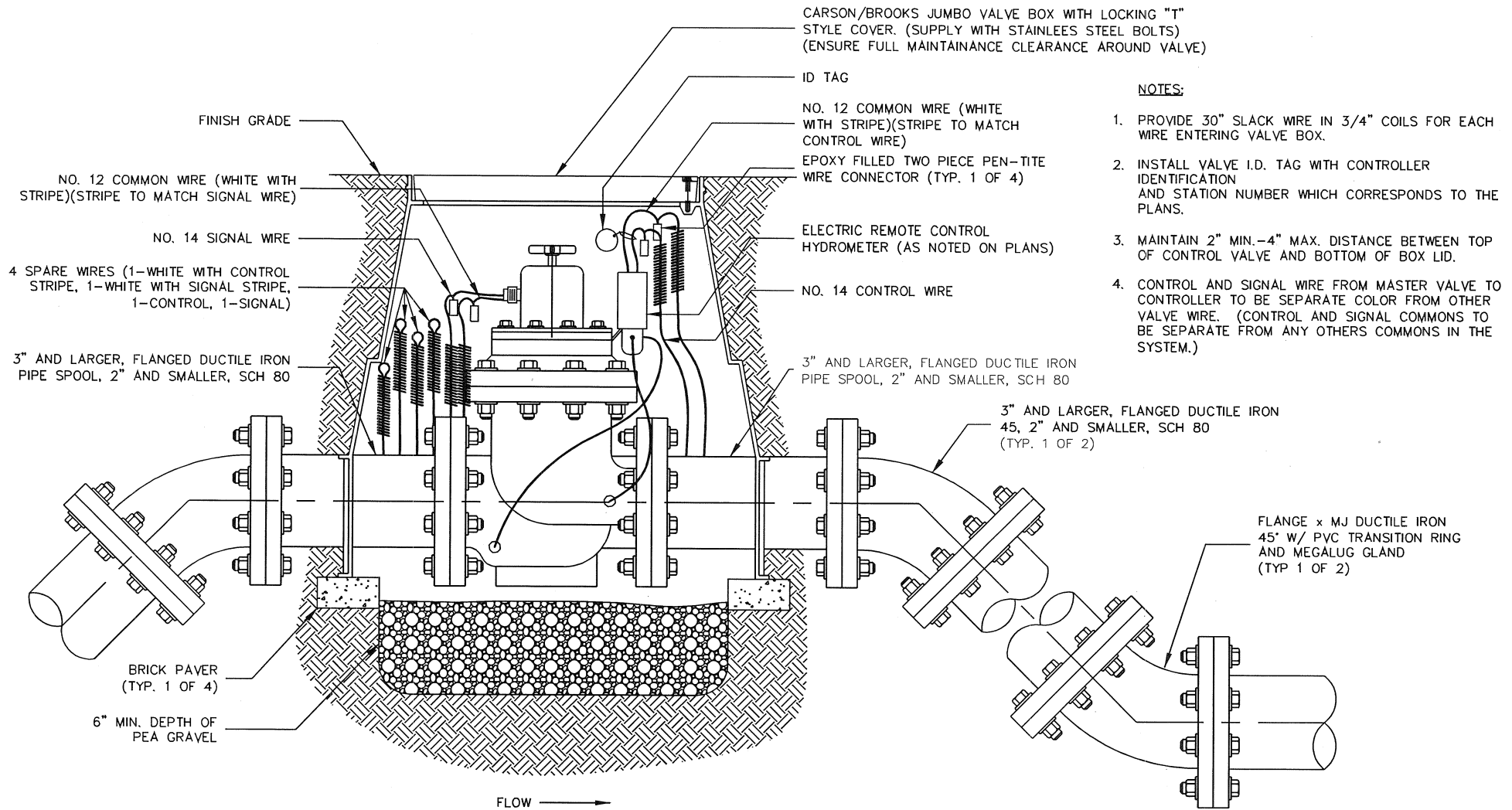
City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

1" MASTER VALVE / FLOW METER

DETAIL NO.
2652

REVISED: 7/15/03



NOTES:

1. PROVIDE 30" SLACK WIRE IN 3/4" COILS FOR EACH WIRE ENTERING VALVE BOX.
2. INSTALL VALVE I.D. TAG WITH CONTROLLER IDENTIFICATION AND STATION NUMBER WHICH CORRESPONDS TO THE PLANS.
3. MAINTAIN 2" MIN.-4" MAX. DISTANCE BETWEEN TOP OF CONTROL VALVE AND BOTTOM OF BOX LID.
4. CONTROL AND SIGNAL WIRE FROM MASTER VALVE TO CONTROLLER TO BE SEPARATE COLOR FROM OTHER VALVE WIRE. (CONTROL AND SIGNAL COMMONS TO BE SEPARATE FROM ANY OTHERS COMMONS IN THE SYSTEM.)

1 1/2" LARGER MASTER VALVE / FLOW METER ASSEMBLY

SCALE: NTS

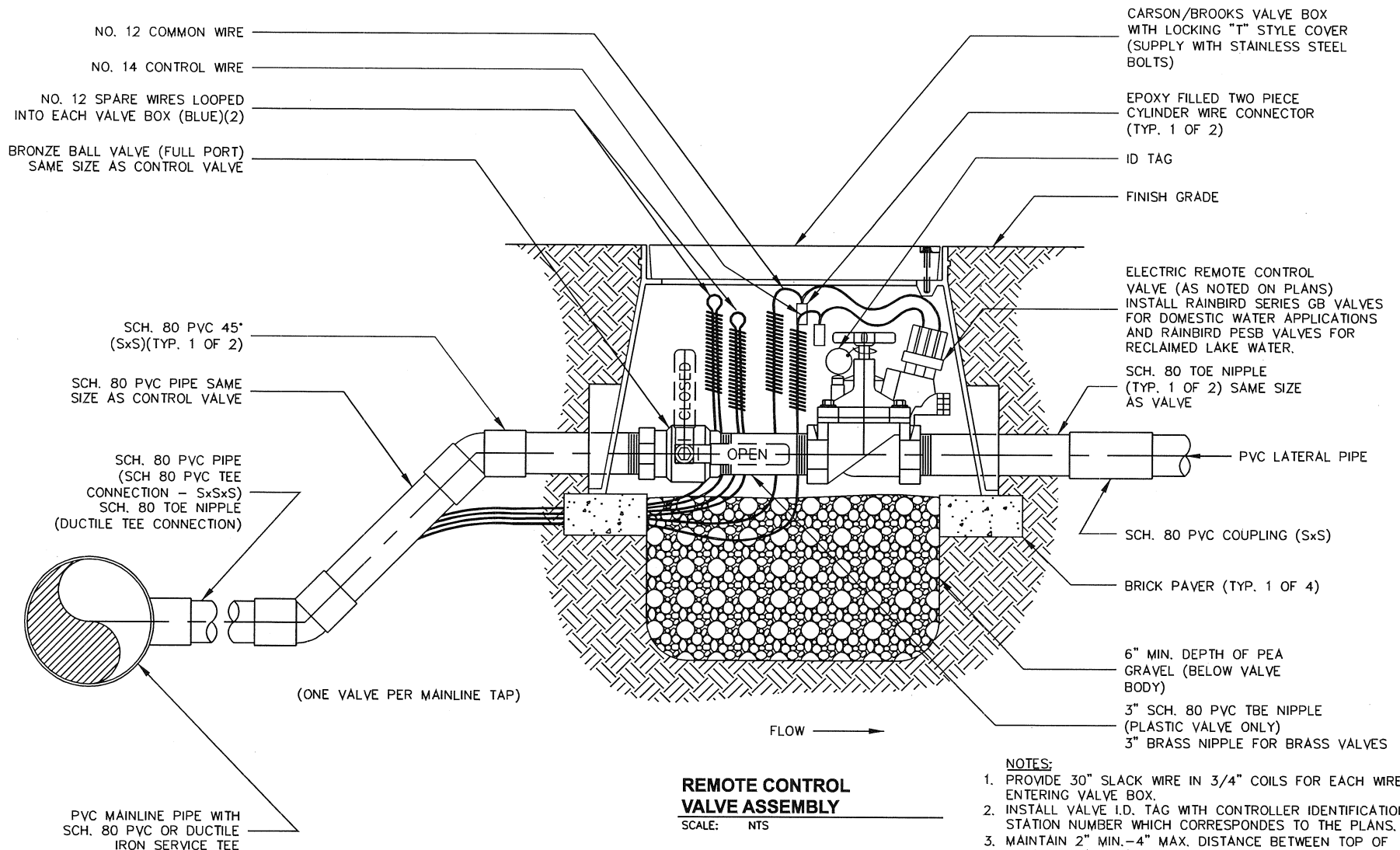
DETAIL NO.
2653

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

1 1/2" & LARGER MASTER VALVE/FLOW METER

DETAIL NO.
2653



NOTES:

1. PROVIDE 30" SLACK WIRE IN 3/4" COILS FOR EACH WIRE ENTERING VALVE BOX.
2. INSTALL VALVE I.D. TAG WITH CONTROLLER IDENTIFICATION AND STATION NUMBER WHICH CORRESPONDES TO THE PLANS.
3. MAINTAIN 2" MIN.-4" MAX. DISTANCE BETWEEN TOP OF CONTROL VALVE AND BOTTOM OF BOX LID.
4. INSTALL D.C. LATCHING SOLENOIDS W/ D.C. CONTROLLERS.
5. FOR BRASS CONTROL VALVES, INSTALL 3" BRASS TBE NIPPLE BETWEEN BALL VALVE AND CONTROL VALVE

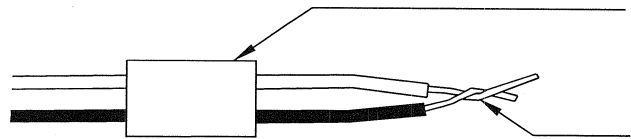
DETAIL NO.
2654

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards &
Specifications Committee

REMOTE CONTROL VALVE ASSEMBLY

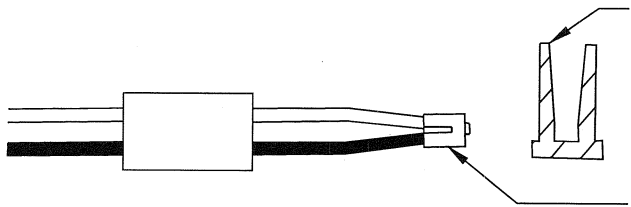
DETAIL NO.
2654



STEP 1

SLIP BASE SOCKET OVER
END OF WIRES

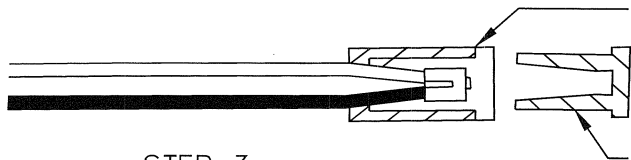
STRIP WIRES APPROX. 5/8" FROM
ENDS - TWIST ENDS TOGETHER



STEP 2

APPLY SEALER TO OUTSIDE OF SEALING
PLUG - FILL CAVITY WITH SEALER

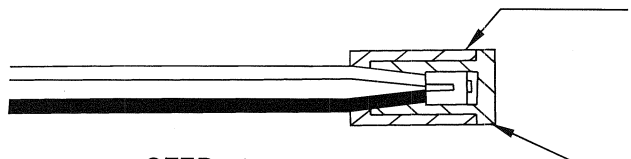
PUT CRIMP SLEEVE OVER WIRE
ENDS - CRIMP SLEEVE AND CUT
OFF EXCESS WIRE



STEP 3

PULL BASE SOCKET OVER WIRE
END AS FAR AS POSSIBLE

PUSH SEALING PLUG INTO
BASE SOCKET



STEP 4

PUSH WIRES TO END OF BASE
SOCKET TO ASSURE COMPLETE
SEALING OF CONNECTION

DRI-SPLICE TYPE WIRE
CONNECTOR

NOTES:

1. FOR WIRE SIZES NO. 14, 12
AND 10, ALL CONNECTIONS
IN VALVE BOXES ONLY.
2. INSTALL SPEARS DS-100
DRI-SPLICE CONNECTORS
WITH DS-300 SEALANT.

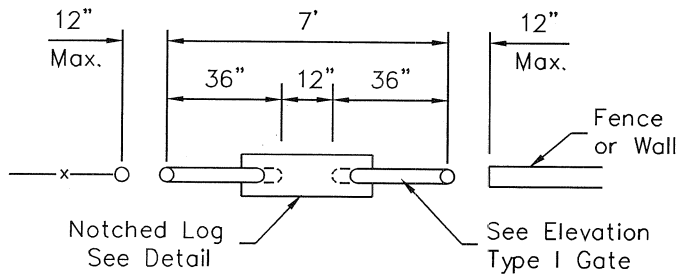
DETAIL NO.
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City of Scottsdale
Standard Details

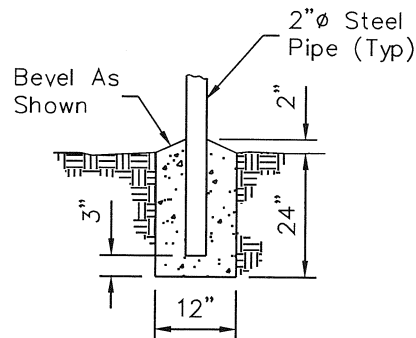
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

TYPICAL IRRIGATION WIRE CONNECTION

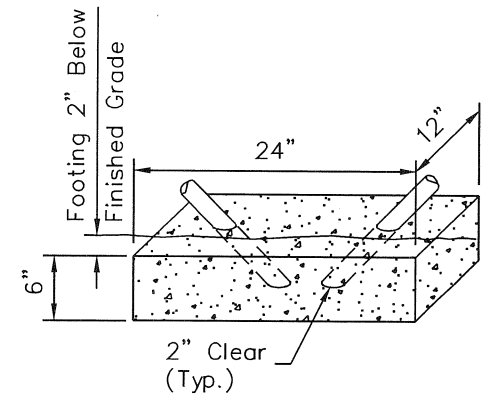
DETAIL NO.
2655



**TYPE I GATE
w/ NOTCHED LOG**



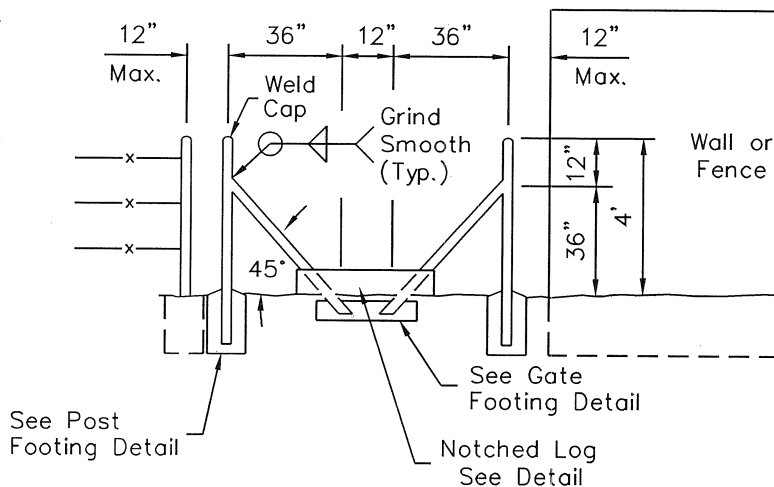
**POST FOOTING
DETAIL**



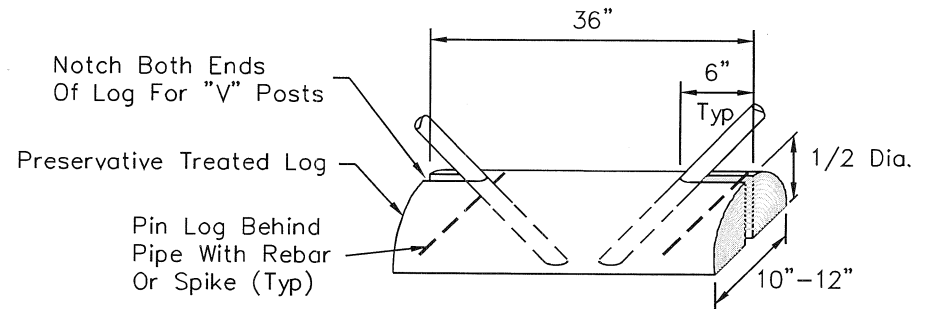
**GATE FOOTING
DETAIL**

NOTES:

1. All Concrete Shall Be Class "B".
2. Paint Rails Per ADOT Specifications. Color Per Plans.
3. Treated Wood Per MAG Section 779.



**ELEVATION
TYPE I GATE**



NOTCHED LOG DETAIL

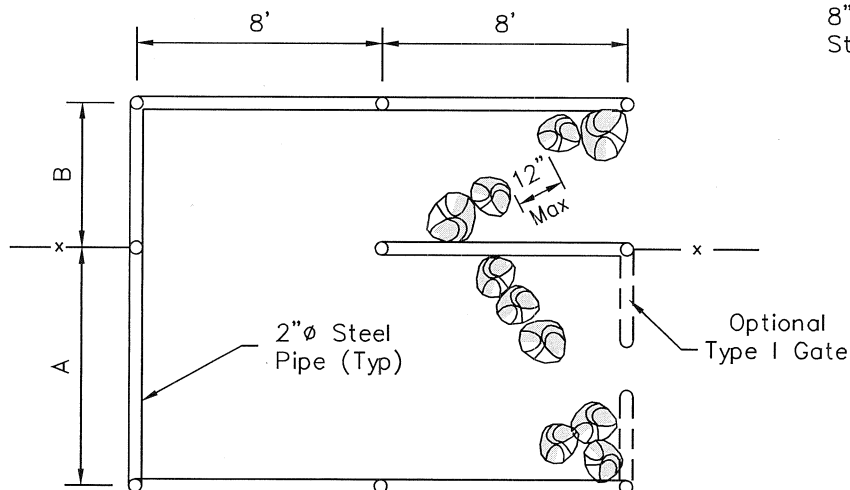
DETAIL NO.
2680-1

**City of Scottsdale
Standard Details**

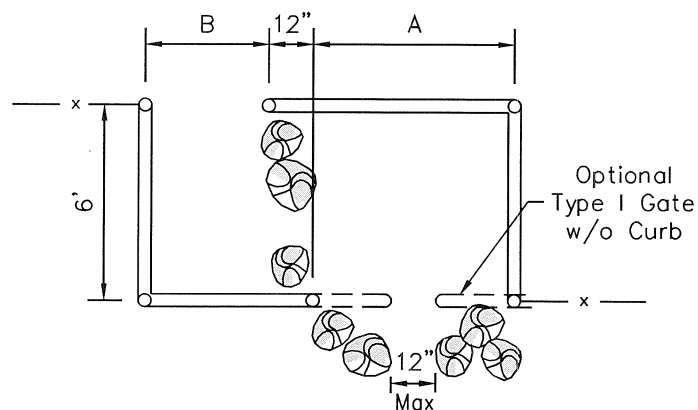
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

TRAIL ACCESS GATES

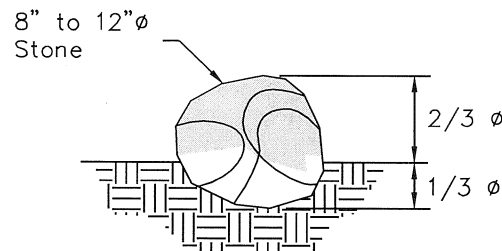
DETAIL NO.
2680-1



TYPE II GATE



TYPE III GATE

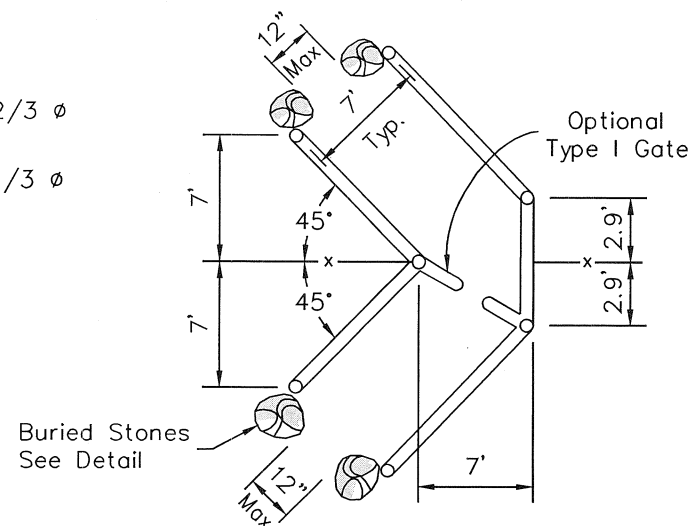


**BURIED STONE
DETAIL**

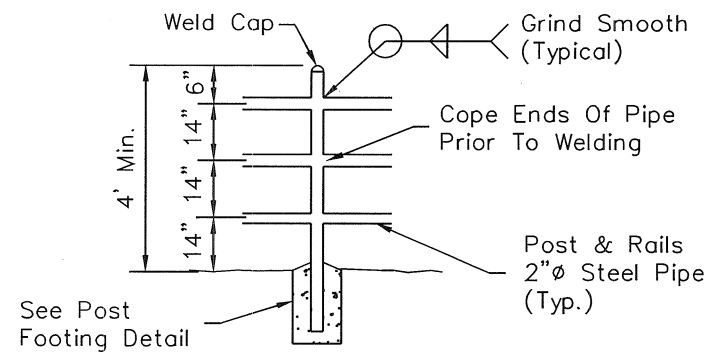
NOTE:

Gate barriers for Type II, III and IV gates shall be buried stones or Type I gate as shown on plan.

TYPE II and III GATE DIMENSIONS		
GATE BARRIER	A	B
Type I	7'	4'
Buried Rocks	4'	4'



TYPE IV GATE



**TYPICAL RAIL ELEVATION
TYPE II, III & IV GATE**

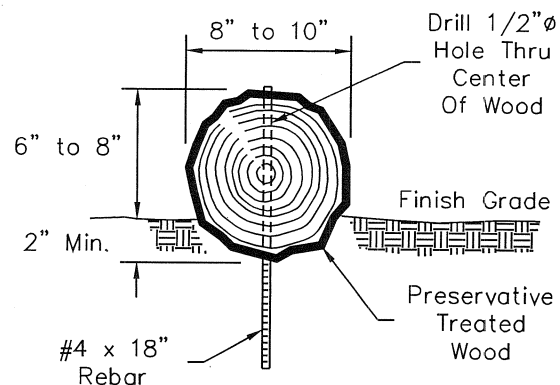
DETAIL NO.
2680-2

**City of Scottsdale
Standard Details**

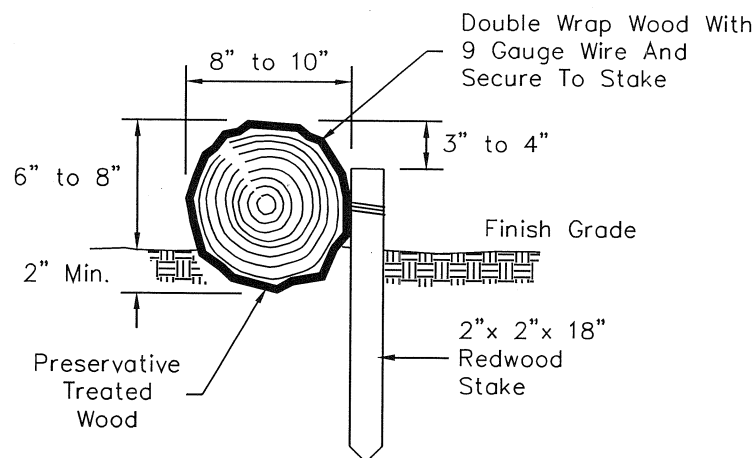
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

TRAIL ACCESS GATES

DETAIL NO.
2680-2



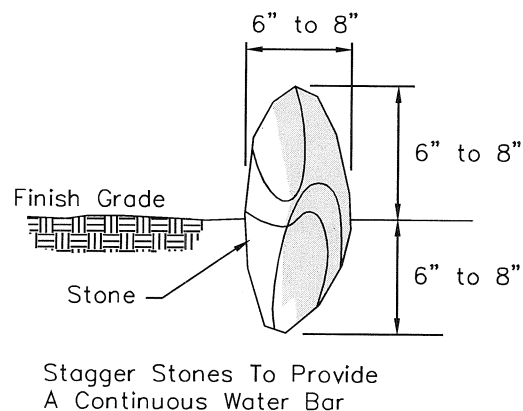
**REBAR SECURED
WOOD BARS**



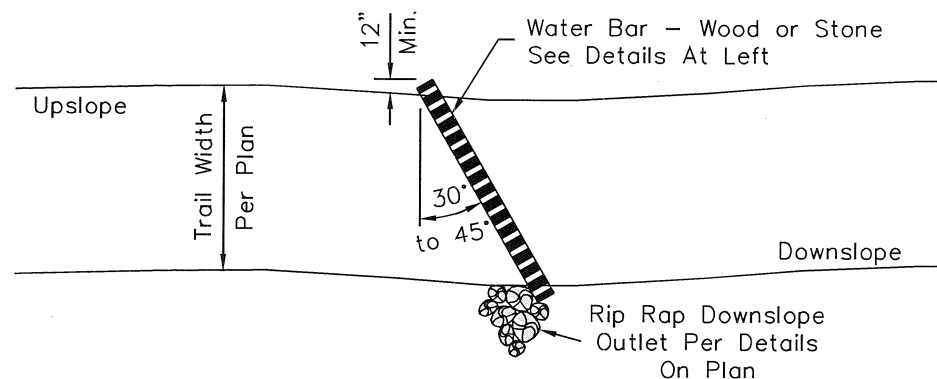
**WIRE SECURED
WOOD BARS**

NOTES:

1. Provide water bars at a maximum 100' interval where trail grade is equal to or greater than 6% and at all locations as shown on plans.
2. Treated wood per MAG Section 779.



STONE BARS



**WATER BARS
PLAN**

DETAIL NO.

2681

**City of Scottsdale
Standard Details**

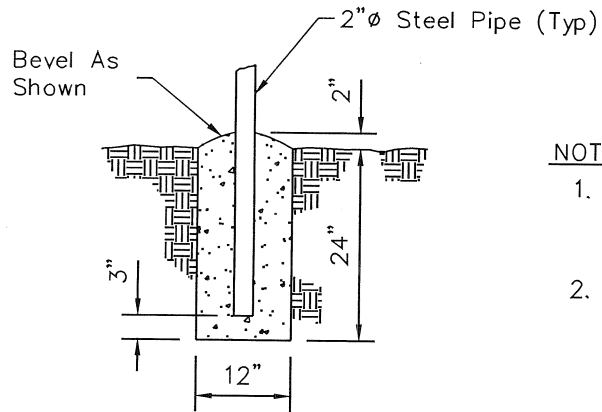
APPROVED BY:

**Scottsdale Standards &
Specifications Committee**

TRAIL WATER BARS

DETAIL NO.

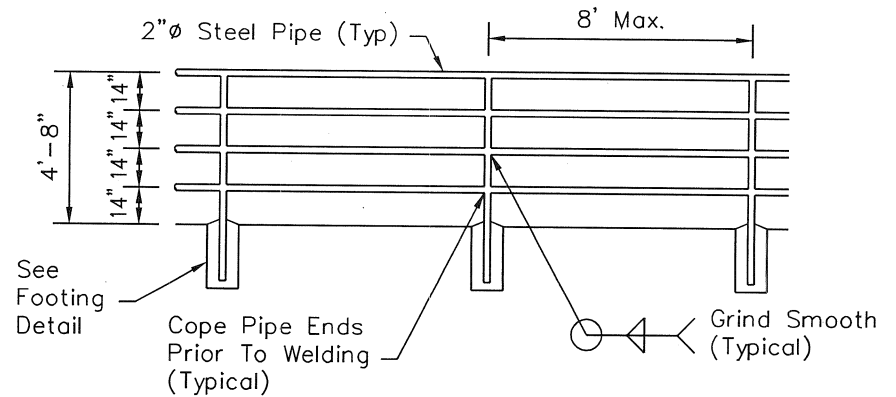
2681



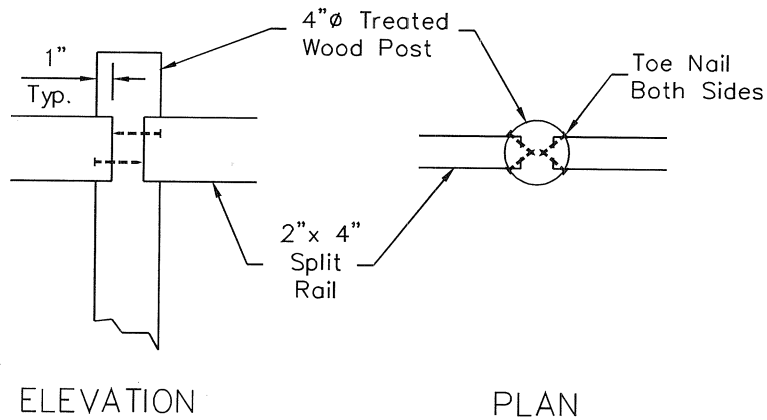
NOTES:

1. Paint Rails Per ADOT Specifications. Color Per Plan.
2. Treated Wood Posts Per MAG Section 779.

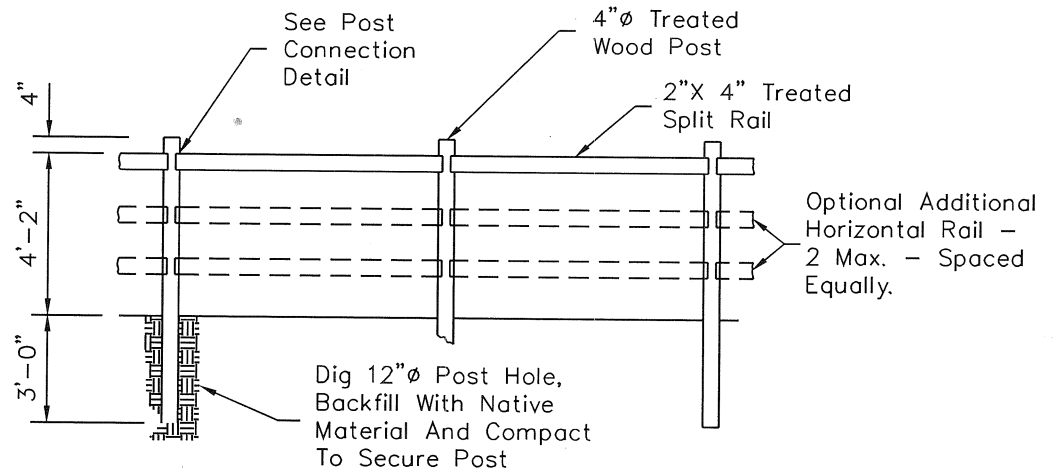
CONCRETE FOOTING DETAIL



STEEL RAIL



POST CONNECTION DETAIL



POST AND RAIL

DETAIL NO.
2682

**City of Scottsdale
Standard Details**

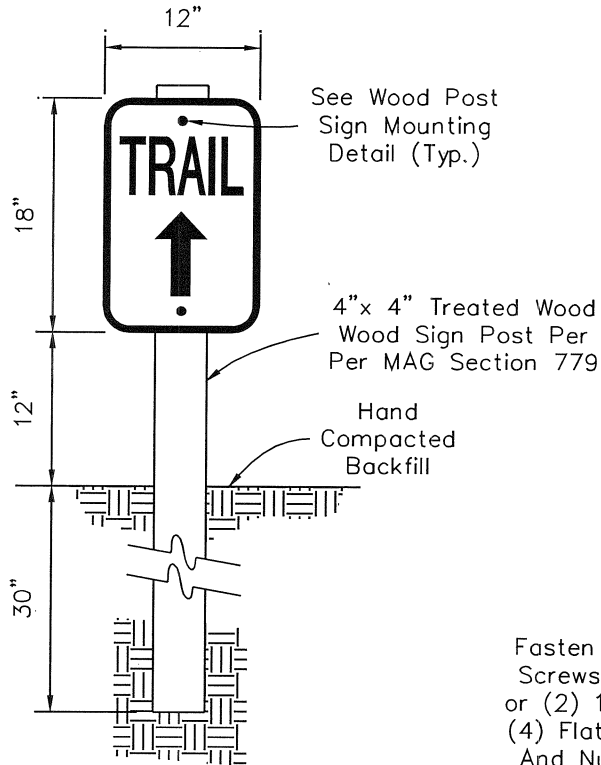
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

TRAIL SAFETY BARRIERS

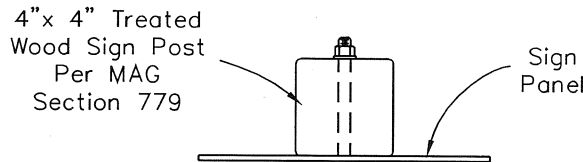
DETAIL NO.
2682

NOTES:

1. Signs shall conform to C.O.S. Supplemental Specifications, Section 402.3.
2. Signs to be mounted on square perforated tubing per C.O.S. Std Det 2131 within C.O.S. Right-of-Way. Treated wood post may be used for trail markers located outside C.O.S. Right-of-Way.
3. Legends shall be reflectorized white vinyl sheeting on a green or brown vinyl background unless otherwise approved by the City of Scottsdale.

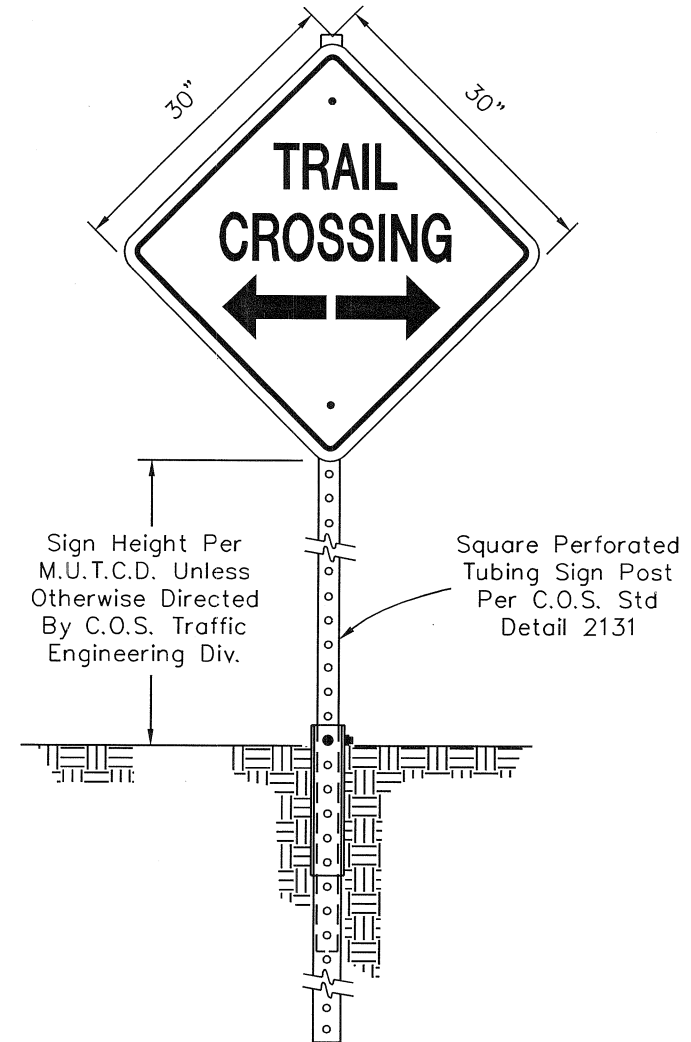


TRAIL MARKER



Fasten With (2) 1/2"x 2" Lag Screws With (2) Flat Washers or (2) 1/2"x 4 1/2" Bolts With (4) Flat Washers. Burr Threads And Nuts With Center Punch.

WOOD POST SIGN MOUNTING DETAIL



TRAIL CROSSING SIGN

DETAIL NO.
2683

**City of Scottsdale
Standard Details**

APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

TRAIL SIGNS

DETAIL NO.
2683

SWING CHECK VALVES USED ON UNDERGROUND FIRE LINES SHALL BE INSTALLED WITHIN A VAULT IN ACCORDANCE WITH THIS DETAIL. THE VAULT SHALL BE INSTALLED ON THE PRIVATE SIDE OF THE PROPERTY LINE. FIRE LINES SERVING A SINGLE RISER SYSTEM SHALL HAVE A POST INDICATING VALVE (PIV) INSTALLED BETWEEN THE SWING CHECK VALVE AND THE FDC ON THE BRANCH SUPPLYING THE INDIVIDUAL RISER (SEE DETAIL "A"). LOOPED FIRE LINES SERVICING MULTIPLE RISERS SHALL HAVE SECTIONAL CONTROL PIVS INSTALLED BETWEEN THE SWING CHECK VALVE AND THE FDC ON THE LOOP FIRE LINE. A SECTIONAL CONTROL PIV SHALL BE INSTALLED ON A LOOPED FIRE LINE TO PROVIDE SECTIONAL CONTROL FOR ISOLATING AREAS OF THE LINE. EACH BRANCH FIRE LINE SHALL HAVE A RISER CONTROL PIV FOR THE INDIVIDUAL RISER. THE PIVS SHALL BE LOCATED AS CLOSE TO THE RISER AS PRACTICAL, (SEE DETAIL "B"). ALL PIVS SHALL BE SIGNED ON THE PIV AS EITHER RISER CONTROL OR SECTIONAL CONTROL VALVES. ALL RISER CONTROL PIVS SHALL INCLUDE THE ADDRESS OF THE PREMISE(S) SERVED. PIVS SHALL BE RED IN COLOR WITH 2 INCHES HIGH WHITE LETTERS AND NUMBERS. WHEN INDICATING CONTROL VALVES ARE INSTALLED ON EACH RISER, THE PIV ON THE BRANCH LINES MAY BE OMITTED, PROVIDED THERE ARE SUFFICIENT SECTIONAL CONTROL PIVS INSTALLED ON THE LOOP TO ENABLE ISOLATION OF BRANCH LINES. A KNOX KEY BOX SHALL BE INSTALLED TO PROVIDE FIRE DEPARTMENT ACCESS TO THE RISER CONTROL VALVE(S) LOCATED INSIDE A BUILDING. ALL STUB OUT AND TEMPORARY FIRE LINE TERMINATIONS (PHASED PROJECTS) SHALL END WITH A PIV PAINTED FOREST GREEN. FDC'S SERVICING SINGLE BUILDINGS SHALL BE SIGNED WITH PREMISE ADDRESS ON THE CHECK VALVE OF THE FDC. FDC'S SHALL BE RED IN COLOR WITH 2 INCHES HIGH WHITE LETTERS AND NUMBERS. FDC'S SERVING MULTIPLE BUILDINGS SHALL BE SIGNED WITH THE PREMISE ADDRESS ON A SIGN (SEE DETAIL "C"). THE SIGN SHALL BE 10 INCHES BY 8 INCHES, RED IN COLOR WITH WHITE 2-INCH LETTERS OR NUMBERS. THE SIGNS SHALL INCLUDE ADDRESS (1234 - 46) OF THE PREMISE(S) SERVED BY THE FDC. THE SIGN SHALL BE SECURELY ATTACHED TO THE FDC CHECK VALVE WITH 1/4" TYPE BOLTS. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A FIRE HYDRANT.

VAULT DETAIL

The drawing consists of two parts: an isometric view on the left and a cross-section view on the right.

Isometric View (Left): Shows the top and side of the vault structure. The top surface is a square with a hatched pattern. The corners are labeled "48° MIN". The structure is shown in a cutaway view to reveal internal components.

Cross-section View (Right): Shows a vertical section of the vault. The top is labeled "GRADE". The structure is divided into "PUBLIC" and "PRIVATE" sections by a vertical dashed line. The height of the vault is labeled "36" MIN". The bottom of the vault is labeled "MINIMUM 6" OF APPROVED COMPACTED BACKFILL MATERIAL".

Diagram illustrating the components and installation of a Fire Department Connection (F.D.C.):

- POST INDICATING VALVE (P.I.V.)**: Located at the top left, with a height dimension of **36"** from the ground level.
- PIV SIGNAGE**: A sign on the P.I.V. indicating the **FIS CON** (Fire Service Connection).
- FIRE DEPT. SIAMASE CONNECTION F.D.C.**: The main connection point, with a height dimension of **36"** from the ground level.
- 1234**: A specific marking on the F.D.C. assembly.
- F.D.C. SIGNAGE**: A sign on the F.D.C. indicating the **1234** marking.
- CHECK VALVE**: A valve located below the F.D.C. connection.
- GRADE**: The ground level, indicated by a hatched line.
- VALVE, BOX AND COVER**: A detail view of the valve assembly, showing a **SWING CHECK VALVE**.
- SEE VAULT DETAIL**: A reference to the vault detail for the lower section of the connection.

Technical drawing showing the front and top side views of a sign assembly.

FRONT VIEW: A rectangular sign with a black background and white text. The text reads "1234 - 1246" on the top line and "1250 - 1264" on the bottom line. Dimensions are indicated: "10\" (width) and "8\" (height). Labels include "RED BACKGROUND" (pointing to the top left corner), "2\" WHITE-LETTERS" (pointing to the text), and "SIGN" (pointing to the sign itself).

TOP SIDE VIEW: A circular component labeled "FDC CHECK VALVE" is shown. It is connected to a vertical line labeled "SIGN". A "U\" TYPE BOLT is shown passing through the circular component and the vertical line.

WHITE
LETTERS

1246
1264

VIEW

BOLT

DC CHECK
VALVE

DE VIEW

POST
INDICATING
VALVE (P.I.V.)

36"

PIV
SIGNAGE

36"

SEC
CON

VALVE, BOX
AND COVER

GRADE

SWING CHECK
VALVE

FIRE DEPT.
SIAMESE
CONNECTION
F.D.C.

F.D.C.
SIGNAGE
(DETAIL C)



CHECK
VALVE

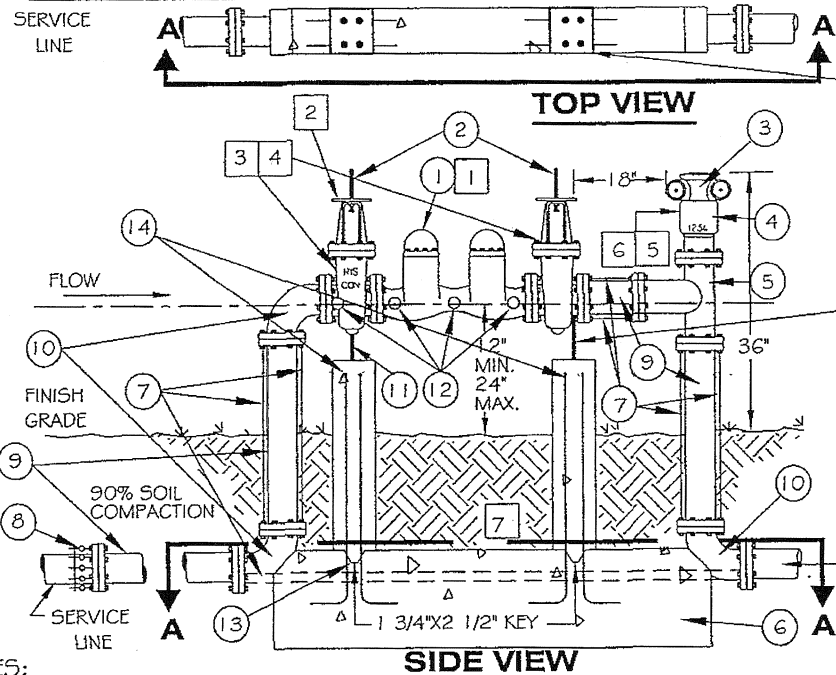
POST
INDICATING
VALVE (P.I.V.)

PIV SIGNAGE

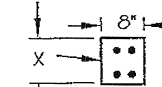
1234
RIS
CON

SEE VAULT DETAIL

DETAIL NO.	 CITY OF CHANDLER STANDARD DETAIL	FIRE DEPT. CONNECTION AND POST INDICATING VALVE FOR APARTMENT COMPLEXES, DOWNTOWN REDEVELOPMENT, AND SPECIAL USES (CONTACT CHANDLER FIRE MARSHAL)	APPROVED: 	DETAIL NO.
FD101 NTS			FIRE MARSHAL DATE: <u>01/11/2002</u>	FD101 NTS

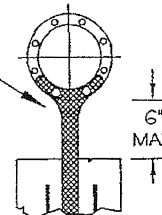


MONOLITHIC SUPPORT
DIMENSIONS



$X = \text{PIPE SIZE} + 2" \text{ MIN. } 6"$

1/2"x2" PLATE STEEL
CORROSION PROTECTED



PIPE SUPPORT BRACE SHALL
BE LOCATED ON CUSTOMER
SIDE AND IMBEDDED IN
CEMENT SUPPORT 18"

CUSTOMER
SIDE (SYSTEM)

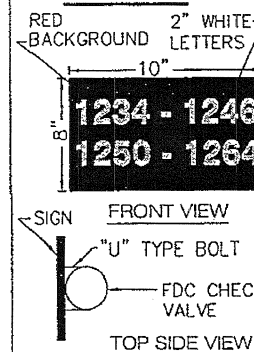
LIST OF MATERIALS

1. APPROVED DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY.
2. O.S. & Y. GATE VALVES.
3. FIRE DEPARTMENT SIAMESE CONNECTION. (FDC)
4. VERTICAL SWING CHECK VALVE.
5. FLANGED TEE.
6. THRUSTBLOCK INSTALLED PER N.F.P.A. #24, MIN. 16".
7. 3/4" ZINC COATED THREADED ROD, BOLTED TO FLANGES, BOTH SIDES TYPICAL EQUAL TENSION MINIMUM FOUR RODS, EVENLY SPACED.
8. FLANGED ADAPTER. (WHEN REQUIRED).
9. PIPE SPOOL. (FLANGED D.I.P.)
10. 90° ELL. (FLANGED D.I.P.)
11. ADJUSTABLE PIPE SUPPORT, PERMANENTLY ATTACHED TO BASE, 6" MAX. HEIGHT.
12. TEST COCKS, (4 REQUIRED), WITH BRASS PLUGS USING ONLY TEFLON TAPE.
13. CONSTRUCTION JOINT KEY TO BE 1 3/4" X 2 1/2".
14. #6 REINFORCING STEEL, DEFORMED BAR, 4" APART, EVENLY SPACED.

NOTES:

1. DOUBLE CHECK VALVE ASSEMBLY SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS PER RECOMMENDED IN THE AWWA-M14 MANUAL.
2. ALL PIPING, VALVES, FITTINGS AND APPURTENANCES DOWNSTREAM OF THE SERVICE LINE SIDE O.S. & Y. VALVE SHALL BE APPROVED FOR FIRE PROTECTION USE AND INSTALLED PER N.F.P.A. #24.
3. ON SINGLE RISER SYSTEMS THE O.S. & Y. VALVE ASSEMBLY SHALL BE SIGNED AS A RISER CONTROL VALVE WITH 2" LETTERS IN A COLOR CONTRASTING WITH THE BACKGROUND. ON MULTIPLE RISER SYSTEMS ADDITIONAL P.I.V.'S MAY BE REQUIRED TO BE INSTALLED AS RISER CONTROL VALVES.
4. THE ENTIRE ASSEMBLY SHALL BE SUPERVISED PER N.F.P.A. #13.
5. FDC'S SERVING SINGLE BUILDINGS SHALL BE SIGNED WITH PREMISE ADDRESS ON THE CHECK VALVE OF THE FDC. FDC'S SHALL BE RED IN COLOR WITH 2 INCHES HIGH WHITE LETTERS AND NUMBERS.
6. FDC'S SERVING MULTIPLE BUILDINGS SHALL BE SIGNED WITH THE PREMISE ADDRESS ON A SIGN (SEE DETAIL "C"). THE SIGN SHALL BE 10 INCHES BY 8 INCHES, RED IN COLOR WITH WHITE 2-INCH LETTERS OR NUMBERS. THE SIGNS SHALL INCLUDE ADDRESS (1234 - 46) OF THE PREMISE(S) SERVED BY THE FDC. THE SIGN SHALL BE SECURELY ATTACHED TO THE FDC CHECK VALVE WITH "U" TYPE BOLTS.
7. FDC'S SHALL BE LOCATED SO THAT THEY ARE WITHIN 150 FEET OF A FIRE HYDRANT.
8. A REGISTERED STRUCTURAL ENGINEER SHALL SEAL THE DESIGN OF THRUST BLOCKS, SUPPORTS AND TIE ROD ASSEMBLIES.

DETAIL C



SCREENING METHOD

1. SCREEN WALLS, PLANT MATERIAL, BERMING AND/OR BUILDING ORIENTATION SHALL BE SUBMITTED TO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION.
2. METHOD OF SCREENING USED MAY REQUIRE FDC'S TO BE REMOTELY LOCATED. FDC LOCATION AND METHOD OF INSTALLATION SHALL BE INCLUDED ON SCREENING PLAN SUBMITTED TO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL.

DETAIL NO.

FD102
NTS



CITY OF CHANDLER
STANDARD DETAIL

DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY (PRIVATE FIRE SERVICE MAIN)

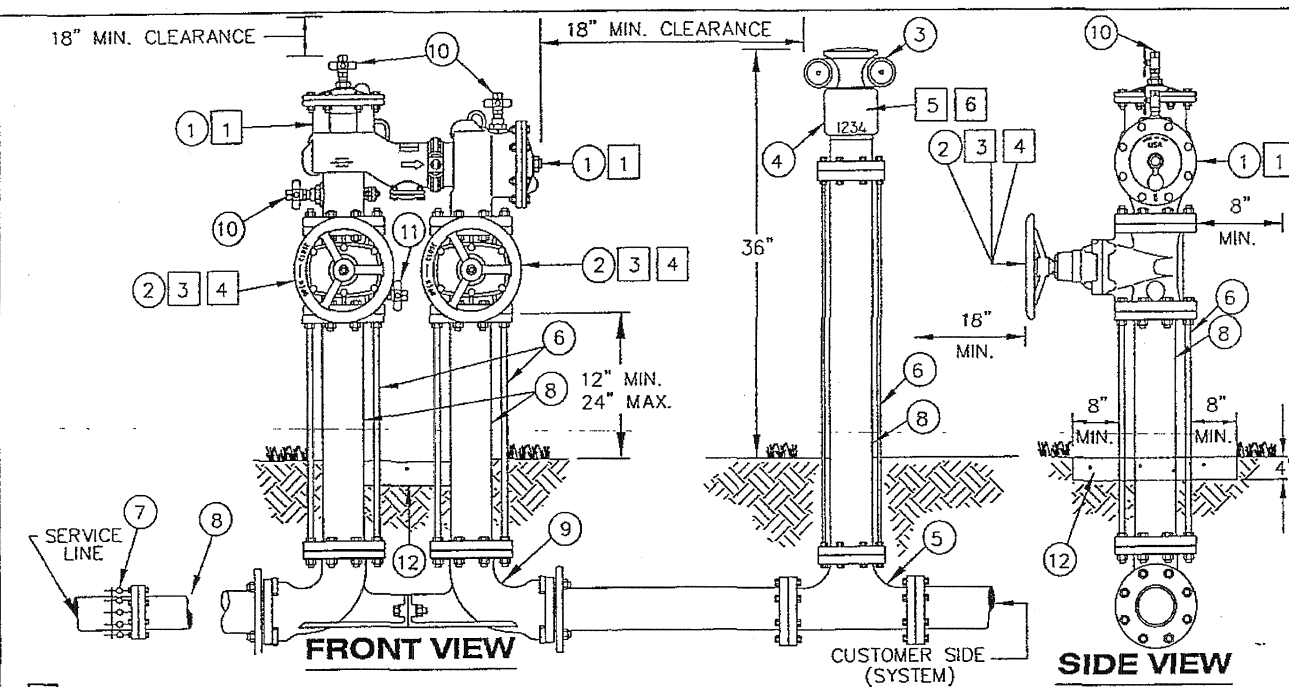
APPROVED:

DATE: 02/08/00

FIRE MARSHAL

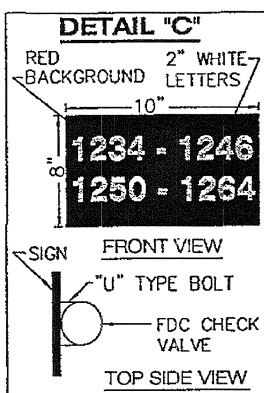
DETAIL NO.

FD102
NTS



- GENERAL NOTES**
1. DOUBLE CHECK VALVE ASSEMBLY SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS PER RECOMMENDED IN THE AWWA-M14 MANUAL.
 2. ALL PIPING, VALVES, FITTINGS AND APPURTENANCES DOWNSTREAM OF THE SERVICE LINE SIDE O.S.+Y. VALVE SHALL BE APPROVED FOR FIRE PROTECTION USE AND INSTALLED PER N.F.P.A. #24.
 3. ON SINGLE RISER SYSTEMS THE O.S.+Y. VALVE ASSEMBLY SHALL BE SIGNED AS A RISER CONTROL VALVE WITH 2" LETTERS IN A COLOR CONTRASTING WITH THE BACKGROUND. ON MULTI RISER SYSTEMS ADDITIONAL P.I.V.'S MAY BE REQUIRED TO BE INSTALLED AS RISER CONTROL VALVES.
 4. THE ENTIRE ASSEMBLY SHALL BE SUPERVISED PER N.F.P.A. #13.
 5. FDC'S SERVING SINGLE BUILDINGS SHALL BE SIGNED WITH PREMISE ADDRESS ON THE CHECK VALVE OF THE FDC. FDC'S SHALL BE RED IN COLOR WITH 2 INCHES HIGH WHITE LETTERS AND NUMBERS.
 6. FDC'S SERVING MULTIPLE BUILDINGS SHALL BE SIGNED WITH THE PREMISE ADDRESS ON A SIGN (SEE DETAIL "C"). THE SIGN SHALL BE 10 INCHES BY 8 INCHES, RED IN COLOR WITH WHITE 2-INCH LETTERS OR NUMBERS. THE SIGNS SHALL INCLUDE ADDRESS (1234 - 46) OF THE PREMISE(S) SERVED BY THE FDC. THE SIGN SHALL BE SECURELY ATTACHED TO THE FDC CHECK VALVE WITH "U" TYPE BOLTS.
 7. FDC'S SHALL BE LOCATED SO THAT THEY ARE WITHIN 150 FEET OF A FIRE HYDRANT.

- LIST OF MATERIALS**
1. APPROVED DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY. (DOUBLE CHECK DETECTOR ASSEMBLY INSTALLATION SIMILAR)
 2. O.S. + Y GATE VALVES.
 3. FIRE DEPT. SIAMESE CONNECTION (FDC).
 4. VERTICAL SWING CHECK VALVE.
 5. FLANGED TEE.
 6. 3/4" ZINC COATED THREADED ROD, BOLTED TO FLANGES, BOTH SIDES TYPICAL EQUAL TENSION MINIMUM FOUR RODS, EVENLY SPACED.
 7. FLANGED ADAPTER, (WHEN REQUIRED).
 8. PIPE SPOOL. (FLANGED DIP)
 9. VALVE SETTER.
 10. TEST COCKS, (3 REQUIRED) WITH BRASS PLUGS USING ONLY TEFLON TAPE.
 11. TEST COCK WITH A STEEL 90° ELL WITH BRASS PLUG USING ONLY TEFLON TAPE.
 12. 4" CLASS "B" CONCRETE PER MAG STD. SPEC. 725.



- SCREENING METHOD**
1. SCREEN WALLS, PLANT MATERIAL, BERMING AND/OR BUILDING ORIENTATION SHALL BE SUBMITTED TO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION.
 2. METHOD OF SCREENING USED MAY REQUIRE FDC'S TO BE REMOTELY LOCATED. FDC LOCATION AND METHOD OF INSTALLATION SHALL BE INCLUDED ON SCREENING PLAN SUBMITTED TO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL.

DETAIL NO.		CITY OF CHANDLER	DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY (PRIVATE FIRE SERVICE MAIN)	APPROVED:	DETAIL NO.
FD103		STANDARD DETAIL		DATE: 02/08/00	FD103
NTS					NTS

EXTERIOR LOCAL ALARM,
10" ELECTRIC BELL OR
APPROVED AUDIBLE DEVICE

2" SYSTEM MAIN DRAIN
PIPED TO EXTERIOR

4-WAY BRACING SECURED TO STRUCTURE

WATER FLOW SWITCH WIRED TO EXTERIOR LOCAL ALARM

HYDRAULIC DESIGN CALCULATIONS PLACARD

300 LB PRESSURE GAUGES ABOVE AND BELOW RISER CHECK VALVE

RISER ALARM CHECK VALVE OR APPROVED VERTICAL CHECK VALVE
SHALL BE PROVIDED ON ALL RISERS. WHEN AN APPROVED DOUBLE
CHECK VALVE BACKFLOW PREVENTION ASSEMBLY IS PROVIDED ON THE
UNDERGROUND FIRELINE AT THE PROPERTY LINE THE SYSTEM RISER
CHECK VALVE MAY BE OMITTED.

RISER CONTROL VALVE. WHEN A PIV IS INSTALLED ON THE UNDERGROUND
FIRE LINE, PER FD DETAIL 101 FOR SINGLE RISER SYSTEMS, THE CONTROL
VALVE ON THE RISER MAY BE OMITTED.

FLANGE 6" MINIMUM ABOVE FINISHED FLOOR. UNI-FLANGES (MEGA-LUGS)
SHALL NOT BE USED ABOVE GRADE.

SLEEVE THROUGH FINISHED FLOOR. CLEARANCE ON ALL SIDES SHALL
NOT BE LESS THAN ONE INCH FOR PIPE SIZES 1" THROUGH 3-1/2", AND
TWO INCHES FOR PIPE SIZES 4" AND LARGER.

THRUST BLOCK PER NFPA #24

NOTE:

1 WHEN RISER CONTROLS ARE LOCATED INSIDE
THE BUILDING A KEY BOX (WITH A MASTER KEY
FOR THE BUILDING) SHALL BE PLACED AT THE
ENTRANCE.

DETAIL NO.

FD105

NTS



CITY OF CHANDLER
STANDARD DETAIL

**FIRE SPRINKLER SYSTEM RISER
COMMERCIAL INSTALLATION**

APPROVED:

John Smith
FIRE MARSHAL

DATE: 01/11/2002

DETAIL NO.

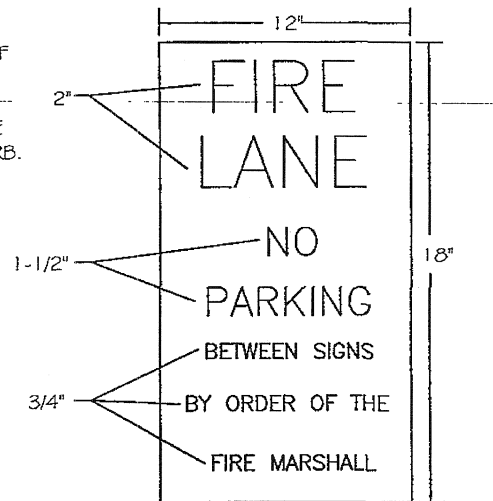
FD105

NTS

MINIMUM ACCESSWAY WIDTH FOR FIRE LANE SIGN PLACEMENT

* WIDTH	PARKING CONDITIONS	SIGNS REQUIRED
LESS THAN 25'	NO PARKING ON EITHER SIDE OF STREET	THIS DETAIL
25' TO LESS THAN 32'	PARKING ON ONE SIDE OF STREET ONLY	ONE SIDE
32' OR MORE	PARKING ON BOTH SIDES OF STREET	NOT REQUIRED

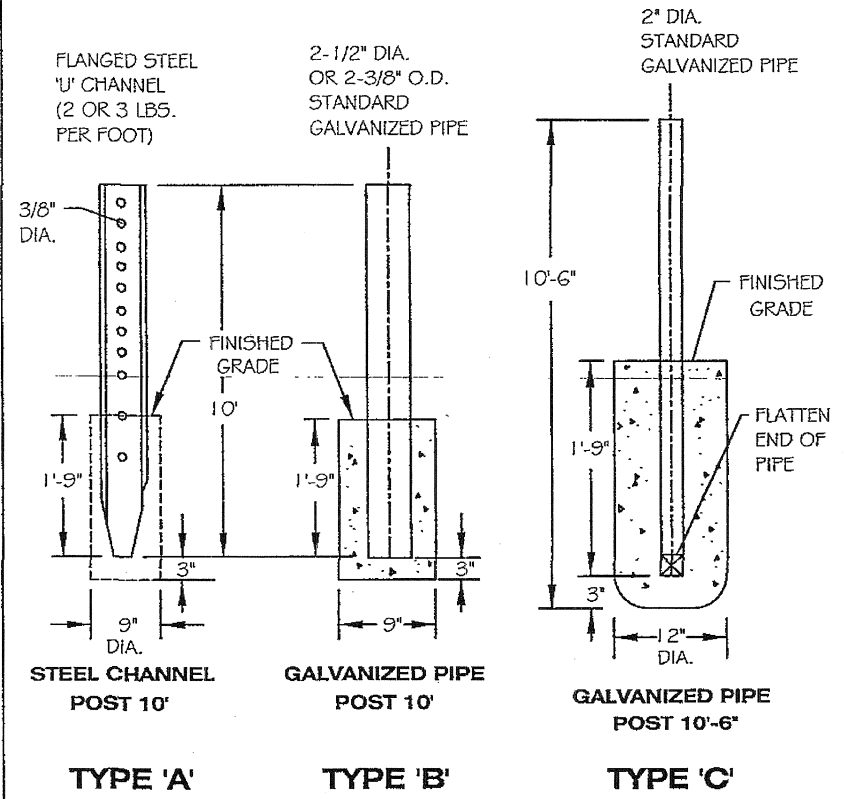
- * ROLLED CURBS SHALL BE MEASURED FROM BACK OF CURB TO BACK OF CURB.
- * ALL OTHER CURBS SHALL BE MEASURED FROM FACE OF CURB TO FACE OF CURB.



NOTES:

1. 2" LETTERS ARE 5/8" WIDE
2. 1-1/2" LETTERS ARE 1/2" WIDE
3. 3/4" LETTERS ARE 1/8" WIDE
4. ALL LETTERS ARE RED WITH A WHITE BACKGROUND
5. THE SIGNS ARE TO BE MOUNTED ON A POST AS PER DETAIL SHOWN.
6. THE BOTTOM OF THE SIGN IS TO BE 7' ABOVE GRADE AND NO MORE THAN 75' APART.
7. CURBING SHALL BE PAINTED BRILLIANT RED, UNLESS A WRITTEN VARIANCE IS PROVIDED TO THE FIRE MARSHAL FOR APPROVAL.
8. THESE SIGNS ARE NOT SUPPLIED BY THE CITY OF CHANDLER

FIRE LANE SIGN BASE



- TYPE 'A': USE DRIVING HEAD FOR DRIVING ALL FLANGED STEEL 'U' CHANNEL POSTS. IN LIEU OF DRIVING, FLANGED STEEL 'U' CHANNEL POSTS MAY BE SET IN CONCRETE BASE FOUNDATION AS PER TYPE 'B' BASE.
- TYPE 'B' & 'C': CONCRETE BASE FOUNDATIONS SHALL BE CLASS 'C' CONCRETE.

DETAIL NO.

FD111
NTS



CITY OF CHANDLER
STANDARD DETAIL

FIRE LANE SIGNAGE

APPROVED: *John Smith*
FIRE MARSHAL
DATE: 01/11/2002

DETAIL NO.

FD111
NTS

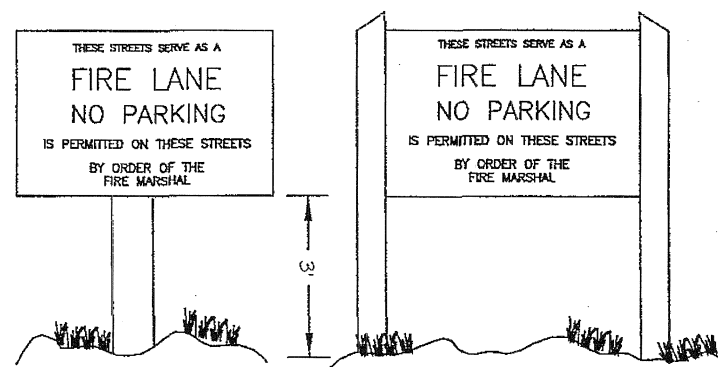
MINIMUM STREET WIDTH FOR FIRE LANE SIGN PLACEMENT


* WIDTH	PARKING CONDITIONS	SIGNS REQUIRED
LESS THAN 25'	NO PARKING ON EITHER SIDE OF STREET	THIS DETAIL
25' TO LESS THAN 32'	PARKING ON ONE SIDE OF STREET ONLY	USE DETAIL 111
32' OR MORE	PARKING ON BOTH SIDES OF STREET	NOT REQUIRED

- * ROLLED CURBS SHALL BE MEASURED FROM BACK OF CURB TO BACK OF CURB.
- * ALL OTHER CURBS SHALL BE MEASURED FROM FACE OF CURB TO FACE OF CURB.

NOTES:

1. THIS SIGN MAY BE USED FOR PRIVATE STREET AND SUBDIVISIONS IN LIEU OF FIRE LANE SIGNS BEING POSTED EVERY 75' AND PAINTED CURBS.
2. 3 INCH LETTERS ARE 5/8 INCH WIDE
3. 2-1/2 INCH LETTERS ARE 1/2 INCH WIDE
4. 1 INCH LETTERS ARE 1/8 INCH WIDE
5. ALL LETTERS ARE RED WITH A WHITE BACKGROUND
6. SIGNS SHALL BE MOUNTED ON EITHER A SINGLE CENTER POST OR DOUBLE SIDE POSTS. POSTS MAY BE STEEL OR WOOD
7. SIGNS SHALL HAVE A MINIMUM DIMENSION OF 24 INCHES BY 18 INCHES HIGH.
8. THE BOTTOM OF THE SIGN IS TO BE 3 FEET ABOVE GRADE SIGNS AND POSTS ARE NOT SUPPLIED BY THE CITY OF CHANDLER.
9. ALL SIGNS SHALL BE VISIBLE UPON ENTERING THE PRIVATE STREET.
10. ALL SIGNS SHALL BE MAINTAINED, SO THEY ARE LEGIBLE.



DETAIL NO. FD112 NTS	 CITY OF CHANDLER STANDARD DETAIL	FIRE LANE SIGNAGE (PRIVATE STREETS AND SUBDIVISIONS)	APPROVED: <i>John H. Smith</i> FIRE MARSHAL DATE: <u>01/11/2002</u>	DETAIL NO. FD112 NTS
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COLOR CODE

THE CITY OF CHANDLER WATER DIVISION AND FIRE DEPARTMENT UTILIZE THE FOLLOWING COLOR CODE IN DISTINGUISHING THE VARIOUS TYPES OF FIRE HYDRANTS:

1. CAT YELLOW: THE BARREL AND BONNET OF ALL FIRE HYDRANTS INSTALLED ON PUBLIC WATER MAINS IN RIGHTS-OF-WAY AND IN PUBLIC UTILITY EASEMENTS (PUE'S) SHALL BE PAINTED CHROME YELLOW.
2. RED/CAT YELLOW: THE BONNET OF ALL FIRE HYDRANTS INSTALLED IN RIGHTS-OF-WAY OR PUE'S SHALL BE PAINTED BRILLIANT RED WHEN A WATER FLOW TEST DETERMINES THAT THE AVAILABLE FLOW FROM SUCH HYDRANT IS 500 GPM OR LESS.
3. BLACK/CAT YELLOW: THE BONNET OF ALL FIRE HYDRANTS INSTALLED ON PRIVATELY OWNED AND MAINTAINED WATER MAINS SHALL BE PAINTED GLOSS BLACK. BLACK STENCILLED LETTERS ON THE BARREL OF THE HYDRANT SHALL DESIGNATE OWNER.
4. BLACK/ALUMINUM: THE BARREL AND BONNET OF ALL HYDRANTS INSTALLED ON RECYCLED (EFFLUENT/GREY WATER) WATER LINES SHALL BE PAINTED TWO (2) COATS OF ALUMINUM PAINT AFTER INSTALLATION. THE BONNET SHALL THEN BE PAINTED BLACK AND 3" LETTERS DESIGNATING THE OWNER OF THE HYDRANT SHALL BE STENCILLED IN GLOSS BLACK ON THE LOWER PORTION OF THE BARREL.
5. BRILLIANT RED: THE BARREL AND BONNET OF ALL FIRE HYDRANTS INSTALLED ON MAINS, WHETHER PUBLIC OR PRIVATE, SHALL BE PAINTED BRILLIANT RED IF THOSE FIRE HYDRANTS ARE SERVED BY FIRE PUMPS OR FIRE DEPARTMENT SIAMESE CONNECTIONS (FDC'S). ALL SUCH FIRE HYDRANTS SHALL BE ISOLATED FROM THE MUNICIPAL WATER SYSTEM BY DETECTOR CHECK VALVES OR STANDARD CHECK VALVES IN ACCORDANCE WITH PUBLIC WORKS DEPARTMENT POLICY P-G1.
6. FOREST GREEN: THE BARREL AND BONNET OF ALL FIRE HYDRANTS, POST INDICATOR VALVES (PIV'S) AND POST INDICATOR VALVE ASSEMBLIES (PIVA'S) INSTALLED FOR FUTURE USE BUT NOT IN SERVICE SHALL BE PAINTED FOREST GREEN.

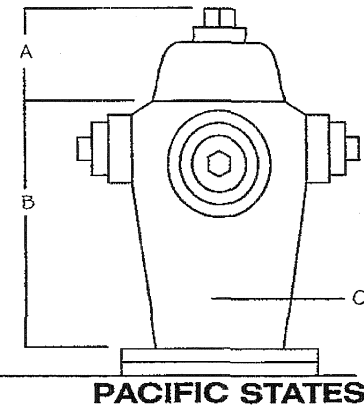
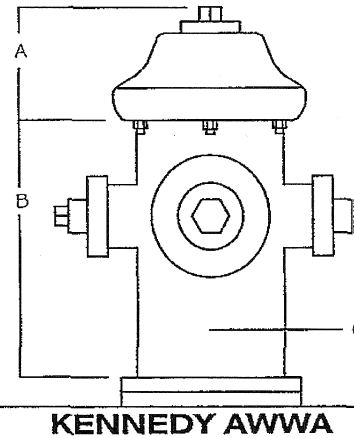
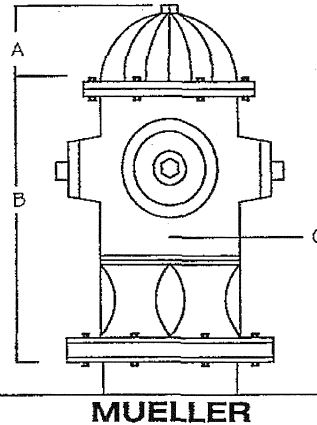
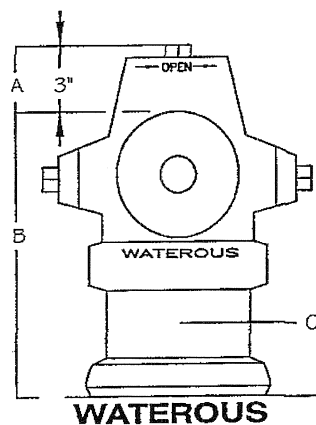
NOTES:

1. ON WATEROUS HYDRANTS ONLY: BONNET (A) WILL BE PAINTED 3" DOWN FROM THE TOP.
2. BLACK STENCILLED LETTERS DESIGNATING OWNER OF HYDRANT SHALL BE LEGIBLE AND PLACED ON THE BACK SIDE OF HYDRANT.

LEGEND:

1. (A) = BONNET (B) = BARREL (C) = I.D. STENCIL
2. TYPE DENOTES COLOR CODE DESIGNATION.
(CY) = CAT YELLOW (BR) = BRILLIANT RED
(GB) = GLOSS BLACK (AL) = ALUMINUM (FG) = FOREST GREEN

TYPE	A	B	C
1	CY	CY	GB
2	BR	CY	GB
3	GB	CY	GB
4	GB	AL	GB
5	BR	BR	GB
6	FG	FG	GB



DETAIL NO.

FD121

NTS



CITY OF CHANDLER
STANDARD DETAIL

**HYDRANT IDENTIFICATION
AND COLOR CODING**

APPROVED:

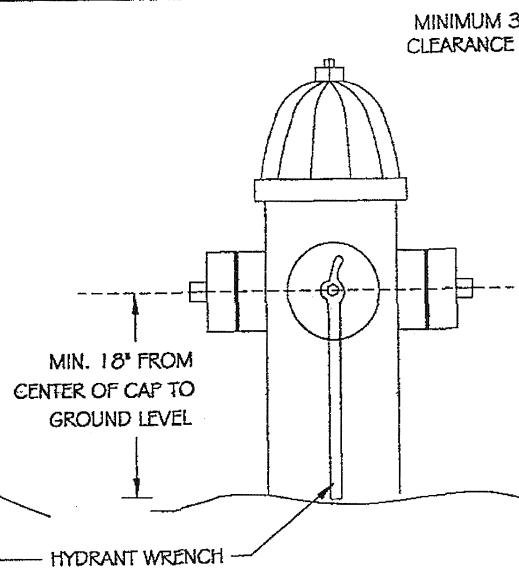
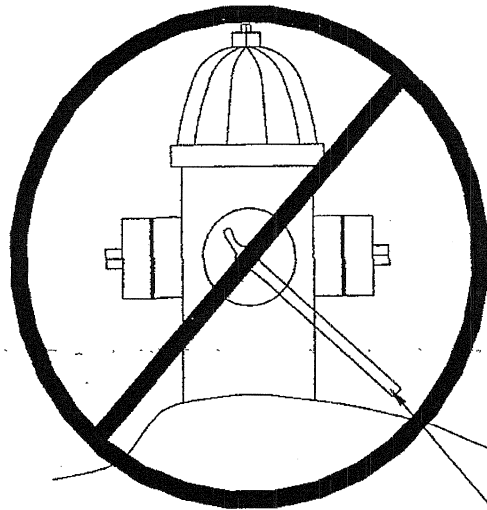
[Signature]
FIRE MARSHAL

DATE: 01/11/2002

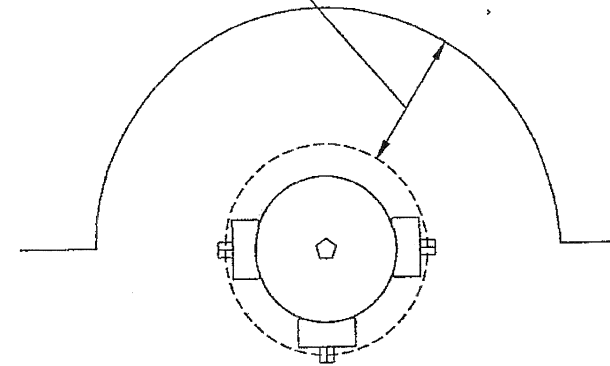
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FD121

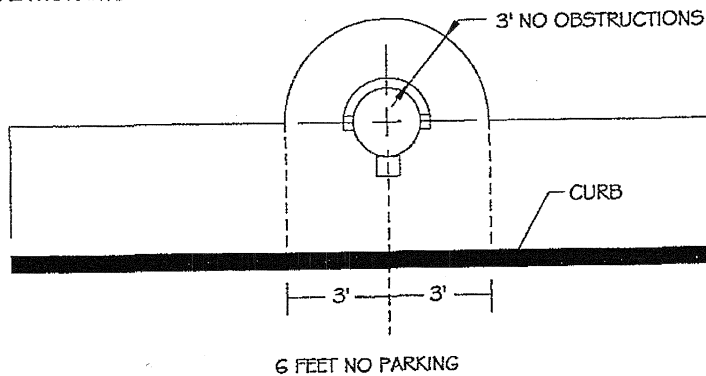
NTS



MINIMUM 3 FOOT UNOBSTRUCTED
CLEARANCE AROUND FIRE HYDRANT

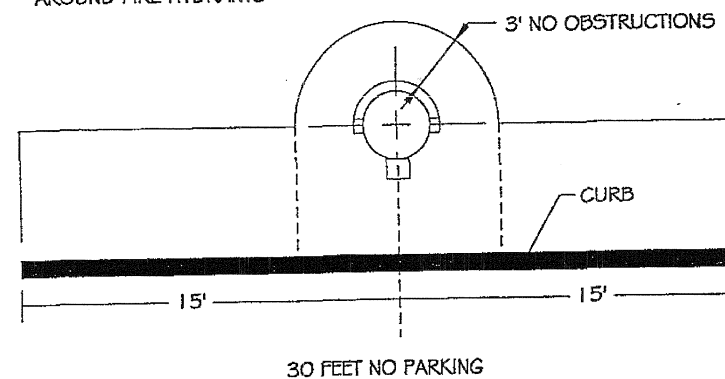


A CLEAR SPACE OF 3 FEET SHALL BE MAINTAINED AROUND
FIRE HYDRANTS



RESIDENTIAL

A CLEAR SPACE OF 3 FEET SHALL BE MAINTAINED
AROUND FIRE HYDRANTS



NON-RESIDENTIAL

DETAIL NO.

FD122
NTS



CITY OF CHANDLER
STANDARD DETAIL

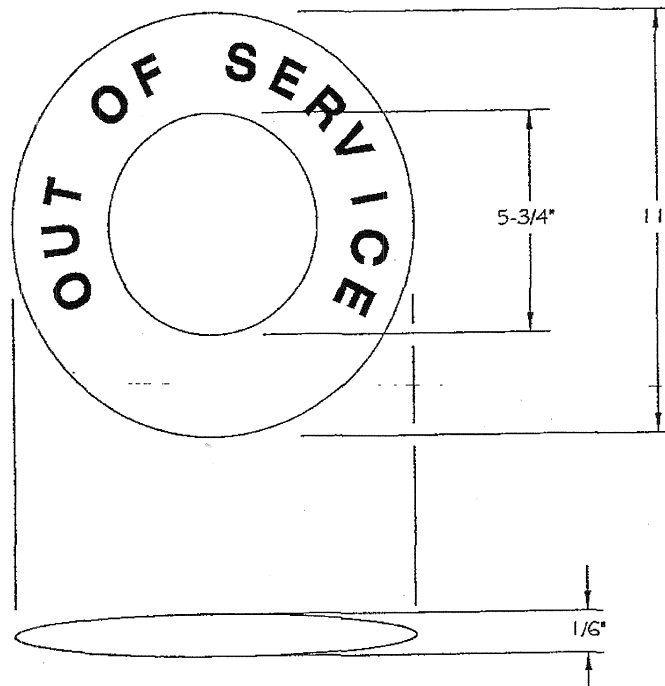
FIRE HYDRANT CLEARANCE

APPROVED:

John Gordon
FIRE MARSHAL
DATE: 2 Feb 99


DETAIL NO.

FD122
NTS

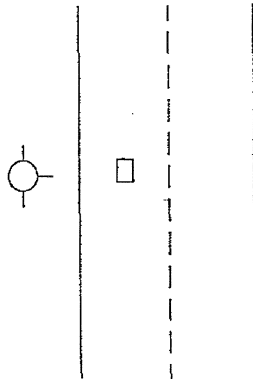


NOTE:

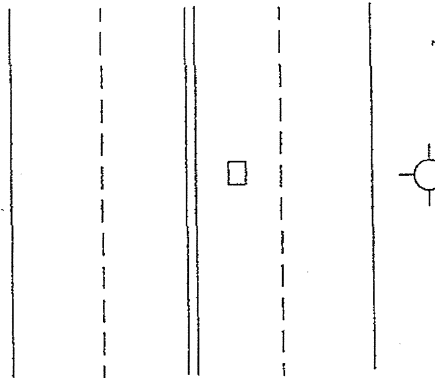
ALL FIRE HYDRANTS INSTALLED ON PRIVATE AND PUBLIC WATER LINES SHALL BE PROVIDED WITH "OUT OF SERVICE" SIGNS. UPON COMPLETION OF REQUIRED INSPECTIONS, TESTS, ACCEPTANCE, AND APPROVAL OF THE WATER SYSTEM BY A C.O.C. INSPECTOR AND THE SYSTEM IS VERIFIED TO BE IN SERVICE, THE "OUT OF SERVICE" SIGNS SHALL BE REMOVED. A HYDRANT REMOVED FROM SERVICE SHALL BE PROVIDED AN "OUT OF SERVICE" SIGN WITHIN THE INITIAL 2 HOURS OF THE SERVICE INTERRUPTION. SIGNS SHALL BE IN ACCORDANCE WITH THIS DETAIL. SIGNS SHALL BE PERMANENTLY MARKED AND CONSTRUCTED OF WEATHERPROOF METAL OR RIGID PLASTIC MATERIAL. THE COLOR OF LETTERING ON SIGNS SHALL BE IN HIGH CONTRAST WITH THEIR BACKGROUND. SIGNS SHALL HAVE THE WORDS "OUT OF SERVICE" ON THE SIGN IN BLOCK CAPITAL LETTERS NOT LESS THAN 1-1/2" IN HEIGHT WITH A STROKE OF NOT LESS THAN 1/4".

DETAIL NO.		CITY OF CHANDLER STANDARD DETAIL	'OUT OF SERVICE' SIGNS	APPROVED: 	DETAIL NO.
FD123 NTS				DATE: 2 Feb 99	FD123 NTS

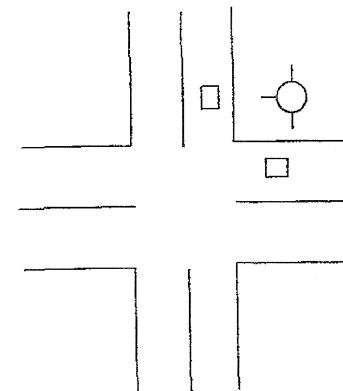
TWO LANE



MULTI LANE



**TWO LANE
AT INTERSECTION**



NOTES:

1. MARKERS FOR FIRE HYDRANTS ON PRIVATE FIRE PROTECTION SYSTEMS SHALL BE STIMSONITE MODEL 911AR (RED) OR APPROVED EQUAL.
2. MARKERS SHALL BE LOCATED IN THE CENTER OF THE TRAFFIC LANE.

DETAIL NO.

FD131
NTS



CITY OF CHANDLER
STANDARD DETAIL

**HYDRANT REFLECTOR LOCATIONS
ON PRIVATE FIRE SYSTEMS**

APPROVED:

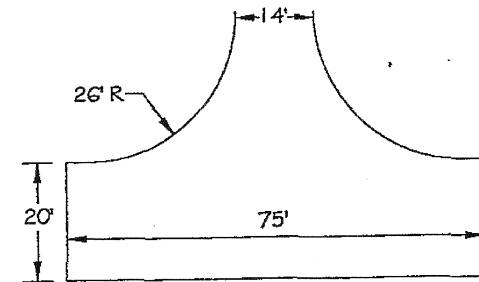
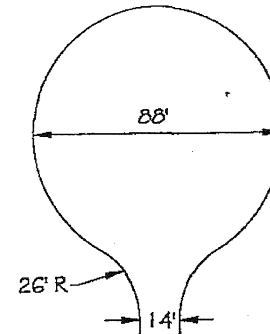
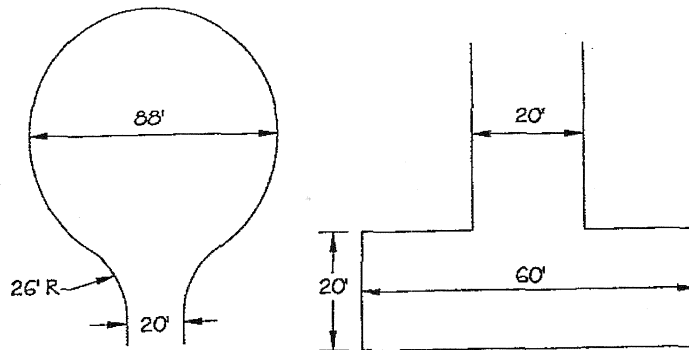
John H. Hark
FIRE MARSHAL

DATE:

2 Feb 99

DETAIL NO.

FD131
NTS



DETAIL A

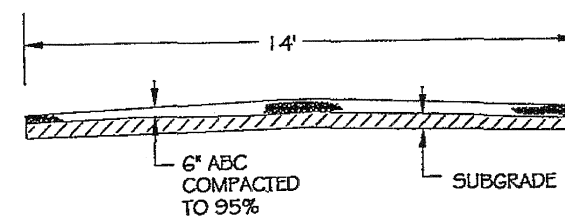
TURNAROUNDS: ALL DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED APPARATUS TURNAROUNDS.

SURFACE: FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS (50,000 LBS. MIN) AND SHALL BE PROVIDED WITH A SURFACE SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

HEIGHT: UNOBSTRUCTED VERTICAL CLEARANCE SHALL BE NOT LESS THAN 13 FEET 6 INCHES.

WIDTH: UNOBSTRUCTED WIDTH SHALL NOT BE LESS THAN 20 FEET.

PERMANENT



DETAIL B

NOTES:

1. TEMPORARY ACCESS ROADWAYS SHALL BE IN ACCORDANCE WITH THE UNIFORM FIRE CODE ARTICLE 87.
2. ROADWAYS SHALL BE CONSTRUCTED AS PER DETAIL B ABOVE AND FIRE APPARATUS TURNAROUNDS SHALL BE IN ACCORDANCE WITH EITHER EXAMPLE IN DETAIL A ABOVE WHEN THE ROADWAYS ARE IN EXCESS OF 150 FEET.

TEMPORARY

DETAIL NO.
FD141
NTS

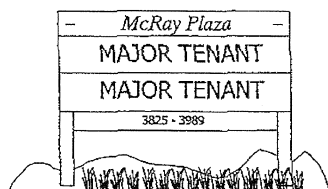


CITY OF CHANDLER
STANDARD DETAIL

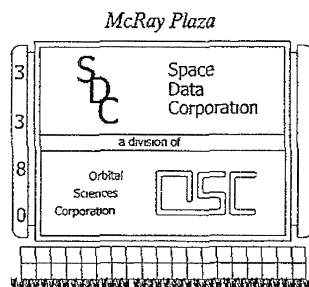
**FIRE APPARATUS
ROADWAYS AND TURNAROUNDS**

APPROVED: *[Signature]*
FIRE MARSHAL
DATE: 3/17/99

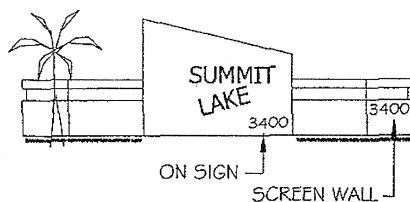
DETAIL NO.
FD141
NTS



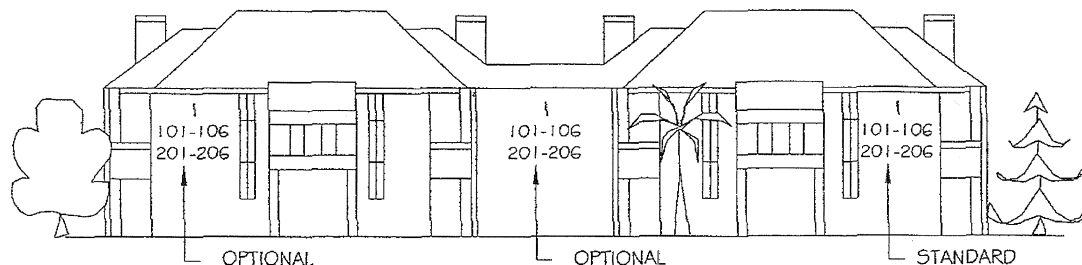
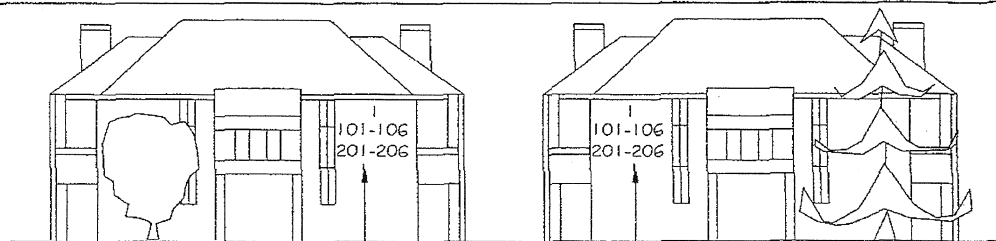
THE LOW-HIGH ADDRESS SHALL BE POSTED ON CENTER IDENTIFICATION SIGN AT MAIN ENTRANCE OF COMMERCIAL MALL, CENTER, VILLAGE, OR SQUARE, SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION.



PERMANENT FIXTURE WITH THE SITUS ADDRESS SHALL BE PLACED IN A CONSPICUOUS LOCATION IF NOT VIEWABLE FROM THOROUGHFARE FRONTAGE SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION.



ADDRESS MAY BE DISPLAYED ON COMPLEX IDENTIFICATION SIGN OR ON THE SCREEN WALL AT THE MAIN ENTRANCE SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION



BUILDING IDENTIFICATION NUMBERS AND INTERVAL OF SUB-STRUCTURE SUFFIXES ASSIGNED TO INDIVIDUAL UNITS SHALL BE DISPLAYED IN THE UPPER, RIGHT HAND CORNER AT THE END OF EACH BUILDING SO AS TO BE PLAINLY VISIBLE FROM THE ACCESS THOROUGHFARE. ALPHA CHARACTERS MAY BE ASSIGNED FOR BUILDING IDENTIFICATION FOR MULTI FAMILY DEVELOPMENTS WHERE SINGLE DIGIT SUB-STRUCTURE SUFFIXES ARE USED MULTI FAMILY DEVELOPMENTS WITH INTERNAL DRIVES, BUILDING LETTER/NUMBER AND RANGE OF SUB-STRUCTURE SUFFIXES SHALL BE POSTED ON EACH SIDE OF BUILDING SO AS TO BE CLEARLY VISIBLE FROM ALL ACCESS DRIVES AND THOROUGHFARES. ** EXCEPTION: INTERVAL OF SUB-STRUCTURE SUFFIXES MAY BE DISPLAYED ELSEWHERE ON BUILDING DUE TO REQUIRED LANDSCAPING, SUBJECT TO APPROVAL OF THE STREET NAMING AND ADDRESSING COORDINATOR. COLOR OF NUMBERS/LETTERS AND BACKGROUND SHALL CONTRAST AND CONFORM TO REQUIREMENTS FOR HELVETICA MEDIUM NUMBERING/LETTERING. DISTANCE AT WHICH LETTERS/NUMBERS SHALL BE LEGIBLE FROM CENTER OF THOROUGHFARE:

0-50' 4" - APPLIES TO SINGLE FAMILY RESIDENTIAL, MULTI-FAMILY, COMMERCIAL MALLS, CENTERS, OR VILLAGES.
 50-200' 10" - INTERVAL OF LOW-HIGH SUB-STRUCTURES SUFFIXES FOR MULTI-FAMILY DEVELOPMENTS MAY BE A MINIMUM OF 6"-8" IN HEIGHT. INTERVAL OF LOW-HIGH SITUS ADDRESSES ON CENTER IDENTIFICATION SIGN MAY BE A MINIMUM OF 8" IN HEIGHT.
 201-300' - 12"
 301-400' - 14"

FOR COMMERCIAL MALLS, CENTERS, VILLAGES AND SQUARES, DISTANCE TO BE MEASURED FROM CENTER OF ACCESS DRIVE TO STRUCTURE(S).

DETAIL NO.

FD151

NTS



CITY OF CHANDLER
STANDARD DETAIL

ADDRESS IDENTIFICATION

APPROVED:

FIRE MARSHAL

DATE: 01/11/2002

DETAIL NO.

FD151

NTS